

Beazer

BEAZER EAST, INC. C/O THREE RIVERS MANAGEMENT, INC.
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March 30, 2010

John T. Spellman, P.E.
Environmental Engineer
Bureau of Construction Services
Division of Hazardous Waste Remediation
New York State Dept. of Environmental Conservation
Bur. of Western Rem. Action
625 Broadway, Room 352
Albany, NY 12233-7017

Re: **New York Tar Emulsion Products Site**
Utica, New York

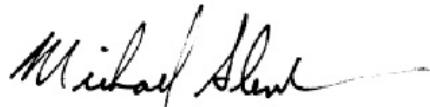
Subject: **Transmittal of 2009 Groundwater Monitoring Report**

Dear Mr. Spellman:

Beazer East, Inc. (Beazer) hereby provides the New York State Department of Environmental Conservation (NYSDEC) with two (2) copies of the *2009 Groundwater Monitoring Report* (Attachment 1) for the New York Tar Emulsion Products (NYTEP) Site in Utica, New York. Attachment 1 documents the groundwater monitoring conducted at the NYTEP Site in compliance with the NYSDEC-approved Groundwater Monitoring Plan. Additionally, Attachment 1 provides a review of the non-aqueous phase liquid monitoring and recovery activities. Recommendations are also provided for NYSDEC consideration.

If you have any questions or need additional information regarding this transmittal, please do not hesitate to contact me at 412-208-8867.

Sincerely,



Michael Slenska, P.E.
Environmental Manager

Attachments

cc: Mr. Greg Rys - NYSDOH (via PDF)
 Mr. Paul Kline – Beazer (via PDF)
 Mr. Eric T. Dadd, Esq. – Dadd & Nelson
 Mr. Richard Schutz – Suit-Kote Corporation
 Mr. Mark Lahr – Key Environmental, Inc. (via PDF)

ATTACHMENT 1

2009 Groundwater Monitoring Report NYTEP Site, Utica, NY

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On behalf of Beazer East, Inc. (Beazer) and Suit-Kote Corporation (Suit-Kote), Key Environmental, Inc. (KEY) hereby provides the New York State Department of Environmental Conservation (Department) with this *2009 Groundwater Monitoring Report* (2009 Report). This work was conducted in accordance with the Department-approved *Site Management Plan* (SMP), which includes the *Groundwater Monitoring Plan* (GMP), *Field Sampling Plan* (FSP), *Quality Assurance Project Plan* (QAPP), and *Health and Safety Plan* (HASP). The GMP defines the components for monitoring the groundwater within the shallow and intermediate water bearing zones at the New York Tar Emulsion Products (NYTEP) Site in Utica, NY (Site). The Site location is shown on Figure 1.

Note that the GMP indicated that a baseline event and two annual events, at least six months apart, would be conducted. The baseline event was completed on May 26 and 27, 2009 and the results were provided in the *Baseline Groundwater Monitoring Report* dated August 17, 2009 (Baseline Report). The first annual event was conducted on December 2, 2009. This report provides the annual sampling results and also includes the analytical data presented in the Baseline Report for comparison purposes.

In addition to the review of the groundwater analytical data, the dense non-aqueous phase liquid (DNAPL) program results will be reviewed herein. The Department's *Record of Decision* (ROD) dated March 30, 2002 specified passive DNAPL recovery as one component of the remedial actions to be conducted at the Site. The specifics of the remedial actions, including the passive DNAPL recovery program, were provided in the Department-approved *Final Engineering Report* dated August 31, 2009. Future reporting on the groundwater sampling and the DNAPL program will be provided in an *Annual Report* as specified in the SMP.

The following sections present the groundwater level monitoring data, review the well sampling activities, evaluate the groundwater sample analytical results, review the DNAPL program results, and provide conclusions and recommendations.

GROUNDWATER MONITORING PROGRAM RESULTS

The groundwater monitoring program for the Site consists of three shallow/intermediate groundwater monitoring well clusters as shown on Figure 2. The six groundwater monitoring wells are gauged for water levels and will be sampled annually for two years, following the baseline sampling event that was conducted in May 2009.

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Groundwater Elevation Measurements

Depth to groundwater was measured in accordance with the American Society for Testing and Materials (ASTM) standard D4750-87 at monitoring wells M09-1S/I, M09-2S/I, and M09-3S/I located on Figure 2. Depth to water, total well depth measurements, and the time/date of measurements were recorded initially and on a monthly basis. This information is summarized in Table 1. Measurements were recorded to the nearest 0.01 foot. These data were used to construct potentiometric surface elevation contour maps, which are depicted on Figures 3 and 4 using the May 2009 data and the most recent December 2009 data, respectively.

Well Sampling Activities

On Tuesday, May 26 and Wednesday, May 27, 2009, Field and Technical Services (FTS) staff performed groundwater sampling at newly installed wells M09-1S, M09-1I, M09-2S, M09-2I, M09-3S, and MW09-3I. Because this was a baseline sampling event, samples were obtained from the M09-3S and M09-3I locations, despite the presence of DNAPL.

The first annual round of groundwater sampling was performed on December 2, 2009 by FTS staff. Wells M09-1S, M09-1I, M09-2S, and M09-2I were sampled. M09-3S and M09-3I were not sampled this round due to the presence of DNAPL.

Low flow purging/sampling technique was used to purge and sample each well using a peristaltic pump with Teflon®-lined tubing. Once the wells had achieved stabilization for the following parameters: turbidity (NTU), temperature (°C), conductivity (ms/cm), ORP (mv), Dissolved Oxygen (mg/l) and pH (SU), a sample was collected to be analyzed for VOC's (BTEX) (Method 8260B) and Polynuclear Aromatic Hydrocarbons (PAH's) (Method 8270C). Copies of the Groundwater Sample Log Sheets are provided in Attachment C. Samples were shipped to TestAmerica Pittsburgh Laboratory for analysis.

Laboratory Groundwater Results

Six monitoring wells were sampled as part of the May 2009 monitoring event. And four wells were sampled as part of the December 2009 monitoring event. The samples were analyzed for BTEX and PAHs and the results are summarized in Table 2. Figure 5 shows the groundwater distribution of constituents of interest. For comparison purposes, Figures 6 and 7 have been created to show the historical groundwater quality of both the shallow and intermediate groundwater zones.

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DNAPL PROGRAM RESULTS

On a monthly basis, the depth to the water (and DNAPL, if present) is measured in each of three DNAPL recovery sumps, nine passive DNAPL recovery wells, and three shallow/intermediate well clusters as shown on Figure 2. Once the DNAPL has collected to a thickness greater than six inches, a bailer or pump is used to remove the DNAPL.

Laboratory DNAPL Results

Two DNAPL samples were obtained as part of the May 2009 monitoring event. The samples were analyzed for BTEX, PAHs, specific gravity, and viscosity. Due to the limited sample volume from the M09-3I locations, viscosity testing could not be completed for this sample. The detected constituents and physical test results are summarized in Table 3. Lab reports were previously provided to the Department with the *July 2009 Monthly Progress Report*.

DNAPL Measurements

DNAPL measurements were obtained at wells EW-100 through EW-103 and EW-105 through EW-109 (7/31/2006 to present), sumps Sump-01 through Sump-03 (10/26/2006 to present), and newly installed monitoring wells M09-1S/I., M09-2S/I, and M09-3S/I (4/22/2009 to present). DNAPL measurement results are provided in Appendix A.

To date, measureable DNAPL has been observed in wells EW-100, EW-101, EW-103, EW-106, EW-107, EW-108, M09-3S, and M09-3I. Trace DNAPL has been observed in wells EW-102, EW-105, and EW-109. DNAPL has not been measured in Sump-1 through Sump-3 and wells M09-1S, M09-1I, M09-2S, or M09-2I. Based on historic and present information, DNAPL has been present in the shallow and intermediate zones from various sources.

DNAPL Recovery

DNAPL recovery for the extraction wells, sumps, and monitoring wells are summarized in Table 4. As shown on Table 4, DNAPL has been recovered from extraction wells EW-100, EW-101, EW-103, EW-106, EW-107, and EW-108. Also, DNAPL has been recovered from monitoring wells M09-3S and M09-3I, in accordance with the recommendation provided in the Baseline Report. DNAPL has not been recovered from Sump-1 through Sump-3 and wells M09-1S, M09-1I, M09-2S, or M09-2I.

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CONCLUSIONS AND RECOMMENDATIONS

The information presented and summarized in this report support the following conclusions:

- Based on Table 1, the flow directions for the shallow water bearing unit are not consistent. Figure 3 shows groundwater flow to the southwest for May 2009 and flow towards the southeast for December 2009. The shallow groundwater elevation data is not indicative of a permanent groundwater aquifer and appears to be consistent with shallow perched water.
- As seen on Table 1 and Figure 4, the intermediate aquifer is flowing toward the north with a hydraulic gradient of 5.3×10^{-4} ft / ft (May 2009) and 5.8×10^{-5} ft / ft (December 2009). These very low gradients show flat groundwater conditions across the Site.
- The baseline groundwater analytical results for well clusters M09-3S/I and M09-1S/I are similar to or lower than the historic Site groundwater results, as indicated on Figures 5 through 7 for the shallow zone and intermediate aquifer on-Site. The analytical results for well cluster M09-2S/I were similar to historical results for off-Site wells, as indicated on Figures 5 through 7.
- The annual groundwater analytical results for wells M09-1S/I and M09-2I were lower compared to the baseline groundwater analytical results (May 2009) as indicated on Figure 5. The analytical results for well M09-2S were higher for the first annual round of groundwater sampling compared to the baseline groundwater analytical results (May 2009) as indicated on Figure 5.
- DNAPL has been observed and removed from EW-100, EW-101, EW-103, EW-106, EW-107, EW-108, M09-3S, and M09-3I.

The following recommendations are provided for the Department's consideration:

- Groundwater level measurements should be completed each month for the first year ending in April 2010, as recommended in the Baseline Report.
- Future groundwater sampling should only be conducted at locations free of DNAPL. As long as DNAPL is present, the baseline sample results for the M09-3I and M09-3S locations are considered representative of the water quality.
- DNAPL recovery from the M09-3S and M09-3I locations should continue, in a manner similar to the DNAPL recovery at the EW locations.
- Abandonment of EW-102, EW-105, EW-109, Sump-1, Sump-2, and Sump-3 should be completed, since there has been no measureable DNAPL at these locations since their installation in 2006.

TABLES

TABLE 1
Groundwater Elevation Summary
2009 Groundwater Monitoring Report
NYTEP Site
Utica, NY

Well Designation	M09-1S		M09-1I		M09-2S		M09-2I		M09-3S		M09-3I	
Measuring Point Elevation	410.55		410.47		411.73		411.74		409.54		409.70	
Date	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)	Depth to Groundwater (ft)	Groundwater Elevation (ft-amsl)
4/22/2009	4.31	406.24	11.60	398.87	6.14	405.59	12.91	398.83	2.21	407.33	10.60	399.10
5/26/2009	4.89	405.66	12.41	398.06	5.60	406.13	13.66	398.08	3.03	406.51	11.80	397.90
6/24/2009	4.20	406.35	11.98	398.49	5.64	406.09	13.22	398.52	2.42	407.12	11.13	398.57
7/30/2009	6.86	403.69	12.61	397.86	7.38	404.35	13.85	397.89	6.99	402.55	11.91	397.79
8/31/2009	7.25	403.30	11.95	398.52	8.53	403.20	13.21	398.53	4.16	405.38	11.91	397.79
9/21/2009	7.85	402.70	12.81	397.66	8.99	402.74	14.10	397.64	5.23	404.31	12.18	397.52
10/21/2009	6.30	404.25	12.21	398.26	9.88	401.85	13.45	398.29	4.20	405.34	11.52	398.18
11/18/2009	5.85	404.70	11.41	399.06	9.75	401.98	11.68	400.06	3.89	405.65	10.78	398.92
12/1/2009	4.93	405.62	11.72	398.75	9.36	402.37	12.96	398.78	3.36	406.18	11.09	398.61
1/13/2010	5.71	404.84	12.30	398.17	9.50	402.23	13.58	398.16	3.09	406.45	11.68	398.02

Table 2
Summary of Detected Constituents
2009 Groundwater Monitoring Letter Report
NYTEP Site
Utica, NY

CONSTITUENT	P/F	UNITS	M09-01I M09-1I 5/26/2009 Primary	M09-01I M-99A-052609 5/26/2009 Duplicate 1	M09-01I M09-1I 12/2/2009 Primary	M09-01I M-99A-120209 12/2/2009 Primary	M09-01S M09-1S 5/26/2009 Primary	M09-01S M09-1S 12/2/2009 Primary	M09-02I M09-2I 5/26/2009 Primary	M09-02I M09-2I 12/2/2009 Primary	M09-02S M09-2S 5/26/2009 Primary	M09-02S M09-2S 12/2/2009 Primary	M09-03I M09-03I 5/27/2009 Primary	M09-03S M09-03S 5/27/2009 Primary
Benzene	Total	(ug/l)	460	350	120	120	42	22	690	700	6200	70000	870	1400
Ethylbenzene	Total	(ug/l)	210	90	23	23	30	84	120	49	280	1800	160	95 J
Toluene	Total	(ug/l)	4.2 J	2.4 J	0.85 U	0.85 U	2.3 J	0.85 U	40 J	14 J	27	3200	49 J	670
Xylene (total)	Total	(ug/l)	190	81	14 J	14 J	38	11 J	110 J	34 J	840	5500	180	300
2-Methylnaphthalene	Total	(ug/l)	62	49	1.9 J	2.4	43	1.5 J	33	15	120	260	250	550 J
Acenaphthene	Total	(ug/l)	25	21	2.2	1.8 J	45	15	17	7.5	72	100	140	240 J
Acenaphthylene	Total	(ug/l)	1.4 J	1.4 J	0.14 J	0.086 U	0.80 J	0.65 J	0.67 J	0.16 J	10	18	6.9	42 U
Anthracene	Total	(ug/l)	0.99 U	1.0 U	1.1 U	1.1 U	13	2.8	0.99 U	0.98 U	8.1	19	12	510 U
Benzo(a)anthracene	Total	(ug/l)	0.17 U	0.17 U	0.18 U	0.18 U	7.2	0.17 U	0.17 U	0.17 U	0.67 U	6.3	2.8	87 U
Benzo(a)pyrene	Total	(ug/l)	0.11 U	0.11 U	0.12 U	0.12 U	6	0.11 U	0.11 U	0.11 U	0.44 U	2.9 J	0.71 J	58 U
Benzo(b)fluoranthene	Total	(ug/l)	0.15 U	0.16 U	0.17 U	0.17 U	9.8	0.15 U	0.15 U	0.15 U	0.62 U	3.1 J	0.15 U	81 U
Benzo(ghi)perylene	Total	(ug/l)	0.082 U	0.084 U	0.088 U	0.088 U	2.6	0.081 U	0.082 U	0.081 U	0.33 U	0.30 U	0.082 U	43 U
Chrysene	Total	(ug/l)	0.10 U	0.10 U	0.17 U	0.17 U	8.7	0.10 U	0.10 U	0.10 U	0.41 U	5	2.2	53 U
Dibenzo(a,h)anthracene	Total	(ug/l)	0.12 U	0.12 U	0.13 U	0.13 U	0.67 J	0.12 U	0.12 U	0.12 U	0.48 U	0.24 U	0.12 U	63 U
Fluoranthene	Total	(ug/l)	0.52 J	0.47 J	0.56 J	0.34 J	24	6.3	0.095 U	0.094 U	4.6 J	18	20	50 U
Fluorene	Total	(ug/l)	4.2	3.9	0.69 J	0.60 J	25	7.6	2.6	0.82 J	31	46	86	49 U
Indeno(1,2,3-cd)pyrene	Total	(ug/l)	0.15 U	0.16 U	0.16 U	0.16 U	2.3	0.15 U	0.15 U	0.15 U	0.61 U	0.30 U	0.15 U	80 U
Naphthalene	Total	(ug/l)	350	320	2.2 J	12 J	37	7.5	220	150	770	2100	6600	11000
Phenanthrene	Total	(ug/l)	5.9	5.1	1.1 J	1.0 J	44	6.1	1.6 J	0.53 J	42	83	120	260 J
Pyrene	Total	(ug/l)	0.54 J	0.52 J	0.38 J	0.27 J	18	4.4	0.11 U	0.1 U	6.0 J	19	13	55 U

Notes:

ug/l = micrograms per liter

J = indicates an estimated value

U = Nondetect result, detection limit number is shown

Table 3
Summary of Detected Constituents in NAPL Samples
2009 Groundwater Monitoring Report
NYTEP Site
Utica, NY

CONSTITUENT	UNITS	EW-103 5/26/2009	M09-031 5/27/2009
Benzene	(mg/kg)	5.0 U	7.2
Ethylbenzene	(mg/kg)	490	0.74 J
Isopropylbenzene	(mg/kg)	26	0.26 U
Methylene chloride	(mg/kg)	5.4 U	1.3 J
Toluene	(mg/kg)	500	2.1 J
Xylene (total)	(mg/kg)	530	2.2 J
1,1'-Biphenyl	(mg/kg)	910 U	17
2-Methylnaphthalene	(mg/kg)	46000	110
Acenaphthene	(mg/kg)	2900 J	86
Acenaphthylene	(mg/kg)	27000	4.2
Anthracene	(mg/kg)	12000	22
Benzo(a)anthracene	(mg/kg)	6600	14
Benzo(a)pyrene	(mg/kg)	1100 U	4.2
Benzo(b)fluoranthene	(mg/kg)	810 U	8.4
Carbazole	(mg/kg)	530 U	10
Chrysene	(mg/kg)	5900	12
Dibenzofuran	(mg/kg)	680 U	56
Fluoranthene	(mg/kg)	11000	88
Fluorene	(mg/kg)	14000	72
Naphthalene	(mg/kg)	91000	480
Phenanthrene	(mg/kg)	35000	200
Pyrene	(mg/kg)	14000	48
Density	g/ml	1.0841	1.0771
Viscosity @ 40 C	cSt	36.26	n/a

Notes:

mg/Kg = milograms per kilogram

J = indicates an estimated value

U = Nondetect result, detection limit number is shown

g/ml = grams per miloliter

cST - centistokes

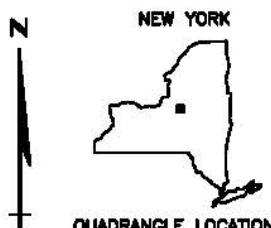
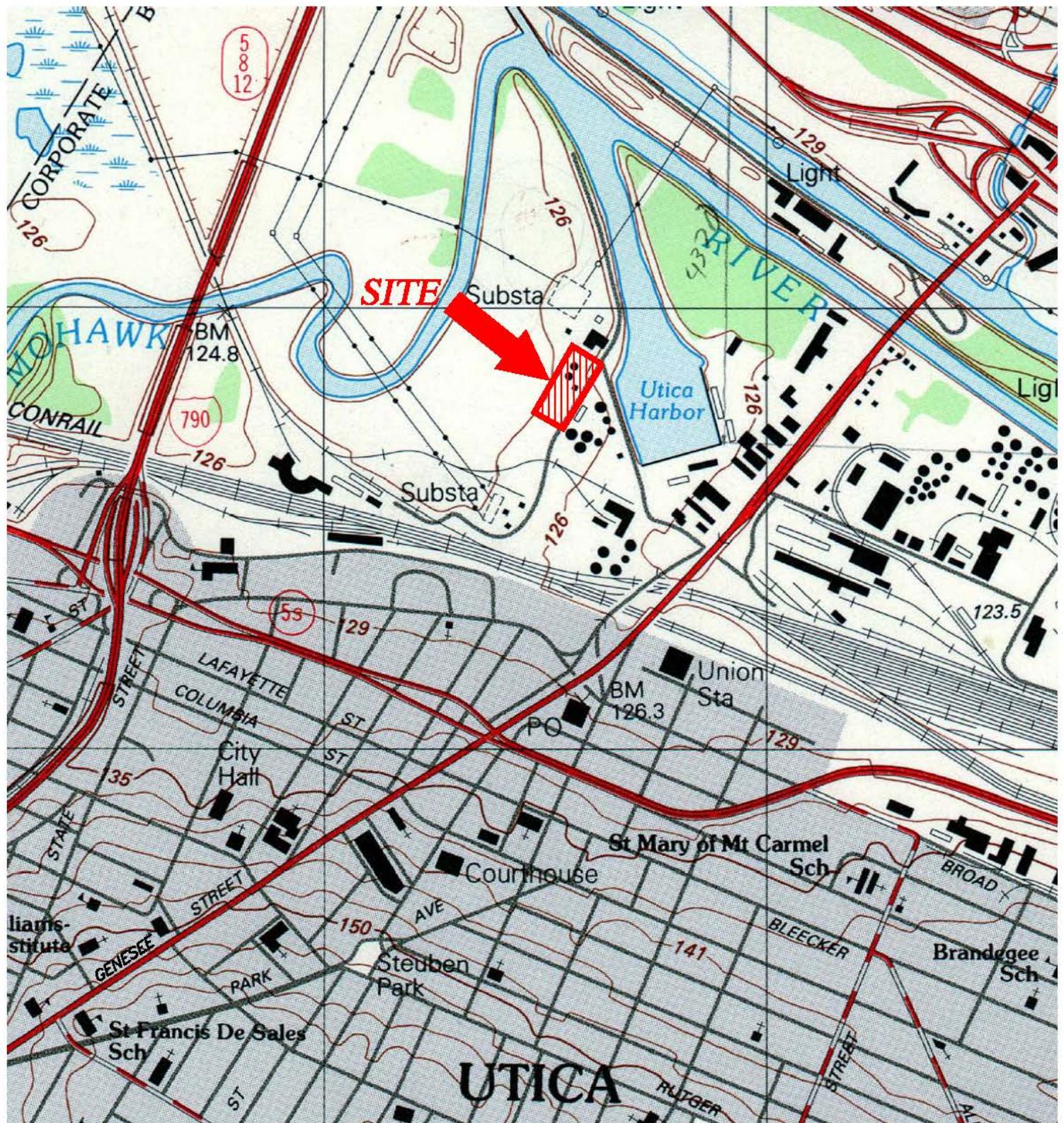
n/a = not applicable

TABLE 4
DNAPL RECOVERY TOTALS
2009 GROUNDWATER MONITORING REPORT
UTICA, NY

Date	Extraction Well									Sump			Monitoring Well		TOTAL
	EW-100	EW-101	EW-102	EW-103	EW-105	EW-106	EW-107	EW-108	EW-109	Sump 1	Sump 2	Sump 3	M09-3S	M09-3I	
7/31/2006	0	0.08	0	0.02	0	0	0.06	0	0	0	0	0	--	--	0.16
8/23/2006	0	0.10	0	0.05	0	0	0.10	0	0	0	0	0	--	--	0.25
9/20/2006	0	0	0	0	0	0	0	0	0	0	0	0	--	--	0.00
10/26/2006	0	0	0	0	0	0	0	0	0	0	0	0	--	--	0.00
11/29/2006	0	0	0	0	0	0	0	0	0	0	0	0	--	--	0.00
12/27/2006	0	0.47	0	0.39	0	0	0	0	0	0	0	0	--	--	0.86
1/23/2007	0	0	0	0	0	0	0	0	0	0	0	0	--	--	0.00
3/21/2007	0	0	0	0	0	0	0.45	0	0	0	0	0	--	--	0.45
4/26/2007	0	0	0	0.7	0	0	1.5	0	0	0	0	0	--	--	2.20
5/30/2007	0	0.55	0	0	0	0	0	0	0	0	0	0	--	--	0.55
6/19/2007	0	1.0	0	1.2	0	0	0	0	0	0	0	0	--	--	2.20
7/17/2007	0	0.4	0	0.75	0	0	0	0	0	0	0	0	--	--	1.15
8/21/2007	0.03	0.25	0	0.75	0	0	1.0	0	0	0	0	0	--	--	2.03
9/27/2007	0	0.00	0	0.6	0	0	0.3	0	0	0	0	0	--	--	0.90
10/27/2007	0	0.50	0	0.8	0	0	0.6	0	0	0	0	0	--	--	1.86
11/18/2007	0	0.00	0	0.3	0	0	0.0	0	0	0	0	0	--	--	0.30
12/8/2007	0	0.00	0	1.1	0	0	0.4	0	0	0	0	0	--	--	1.50
1/10/2008	0	0.00	0	0.8	0	0	0.13	0	0	0	0	0	--	--	0.93
2/14/2008	0	0.53	0	0.7	0	0	0.1	0	0	0	0	0	--	--	1.33
3/27/2008	0	0.00	0	1.1	0	0	0.13	0	0	0	0	0	--	--	1.23
4/22/2008	0.15	0.00	0	0.3	0	0	1.1	0	0	0	0	0	--	--	1.55
5/22/2008	0	0.20	0	0.6	0	0	0.3	0	0	0	0	0	--	--	1.06
6/26/2008	0	0.00	0	1	0	0	0.0	0	0	0	0	0	--	--	1.00
7/29/2008	0.03	0.13	0	0.4	0	0	0.6	0	0	0	0	0	--	--	1.19
8/28/2008	0.00	0.36	0	0.75	0	0.0	0.24	0	0	0	0	0	--	--	1.35
9/23/2008	0	0.00	0	0.52	0	0	0.4	0	0	0	0	0	--	--	0.89
10/30/2008	0.19	0.22	0	0.92	0	0	0.3	0	0	0	0	0	--	--	1.63
11/21/2008	0	0.00	0	0.3	0	0	0.0	0	0	0	0	0	--	--	0.30
12/16/2008	0	0.00	0	1.0	0	0	0.0	0	0	0	0	0	--	--	1.00
2/19/2009	0.50	0.00	0	2.0	0	0	0.0	0	0	0	0	0	--	--	2.5
3/25/2009	0.38	0.00	0	0.45	0	0	0.0	0	0	0	0	0	--	--	0.83
4/23/2009	0.31	0	0.25	0	0	0	0.8	0	0	0	0	0	--	--	1.32
5/26/2009	0	0.00	0	0.69	0	0	0.0	0	0	0	0	0	--	--	0.69
6/24/2009	0.56	0.22	0	0.58	0	0.27	0.26	0	0	0	0	0	--	--	1.89
7/30/2009	0	0.00	0	0.68	0	0	0.0	0	0	0	0	0	--	--	0.68
8/31/2009	0	0.23	0	0.57	0	0	0.62	0	0	0	0	0	0.10	0.15	1.67
9/21/2009	0.39	0.00	0	0.57	0	0	0.00	0	0	0	0	0	0.15	0.15	1.26
10/21/2009	0	0.30	0	0.59	0	0	0.00	0.26	0	0	0	0	0.10	0.10	1.35
11/18/2009	0	0.40	0	0.59	0	0.10	1.11	0	0	0	0	0	0.10	0.10	2.4
12/1/2009	0	0.00	0	0	0	0	0.00	0	0	0	0	0	0.10	0.10	0.2
1/13/2010	0	0.00	0	0.73	0	0	0.00	0	0	0	0	0	0.25	0.15	1.13
TOTAL	2.23	6.24	0.00	22.75	0.00	0.37	10.37	0.26	0.00	0.00	0.00	0.80	0.75	43.78	
NAPL Summary	EW-100	EW-101	EW-102	EW-103	EW-105	EW-106	EW-107	EW-108	EW-109	Sump 1	Sump 2	Sump 3	M09-3S	M09-3I	Total
2006	0.00	0.65	0.00	0.46	0.00	0.00	0.16	0.00	0.00	0.00	0.00	NA	NA	1.27	
2007	0.03	2.70	0.00	6.20	0.00	0.00	4.21	0.00	0.00	0.00	0.00	NA	Na	13.14	
2008	0.37	1.96	0.00	12.36	0.00	0.27	4.27	0.00	0.00	0.00	0.00	NA	NA	19.23	
2009	1.83	1.46	0.00	7.97	0.00	0.37	2.75	0.26	0.00	0.00	0.00	0.55	0.60	15.79	
2010	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.15	1.27	

NA - Not available, wells were not installed till 2009.

FIGURES



REFERENCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
OF UTICA EAST, NEW YORK 1983

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CHERNEE, PA 15106

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

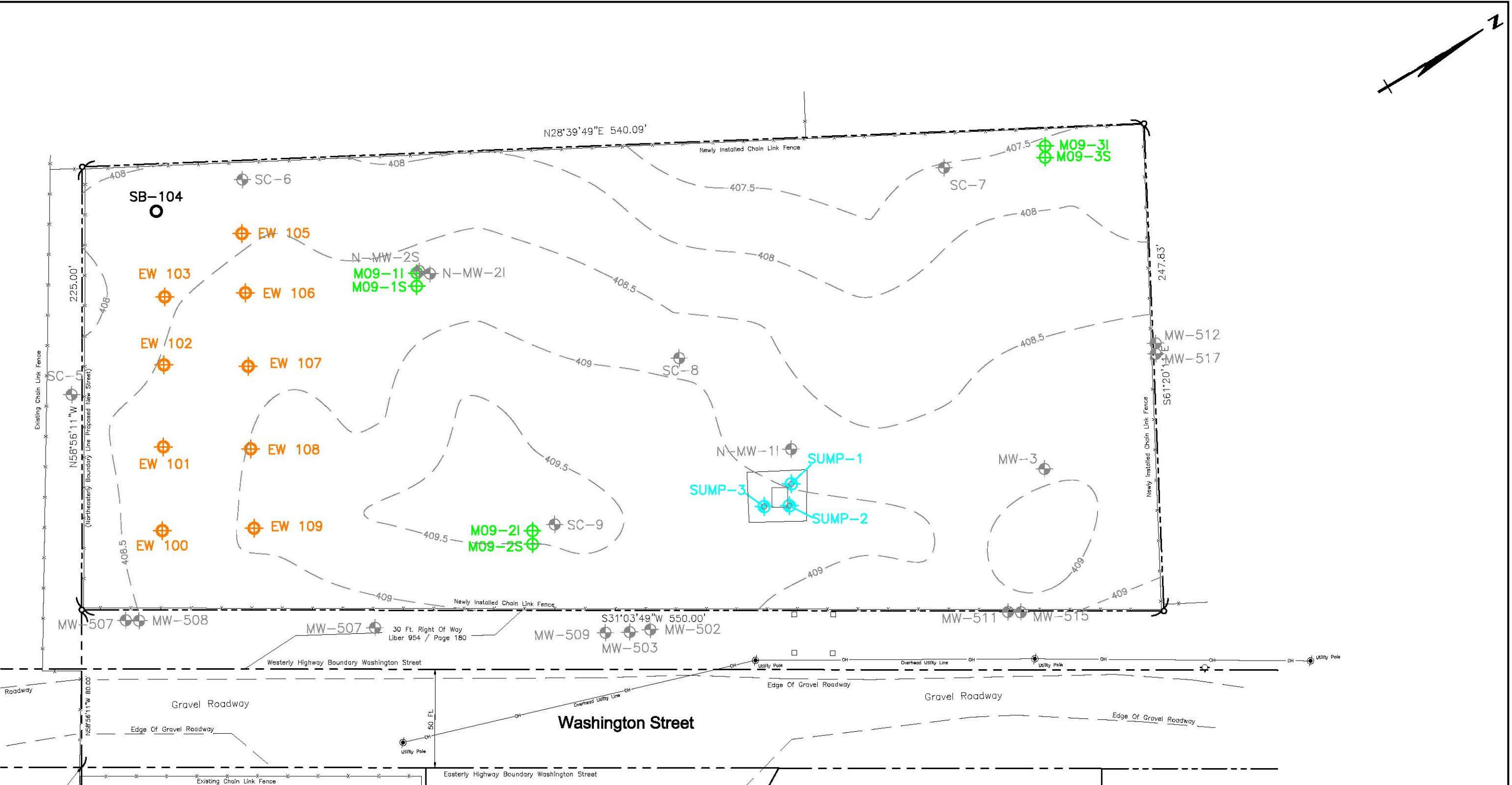
DRWN:	SCC	DATE: 08/07/00
CHKD:	RMB	DATE: 08/07/00
APPD:	MRL	DATE: 08/07/00
SCALE:	1" = 1000'	

KEY ENVIRONMENTAL
INCORPORATED

2009 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

PROJECT NO: 08-856

FIGURE 1



LEGEND

- SITE PROPERTY BOUNDARY
- EDGE OF ROAD
- EDGE OF GRAVEL ROAD
- GROUND SURFACE ELEVATION CONTOUR INTERVAL

- * * * * CHAIN LINK FENCE
- ABANDONED MONITORING WELL
- SOIL BORING

- SUMP-1**
- EW 109**
- M09-1**
- SHALLOW ZONE DNAPL MONITORING LOCATION
- INTERMEDIATE ZONE DNAPL MONITORING LOCATION
- SHALLOW AND INTERMEDIATE ZONE GROUNDWATER MONITORING WELL PAIR

0 50 100 FEET

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN:	SCC	DATE:	08/06/09
CHKD:	RMB	DATE:	08/08/09
APPD:	MRL	DATE:	08/08/09
SCALE:	AS SHOWN		

2009 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

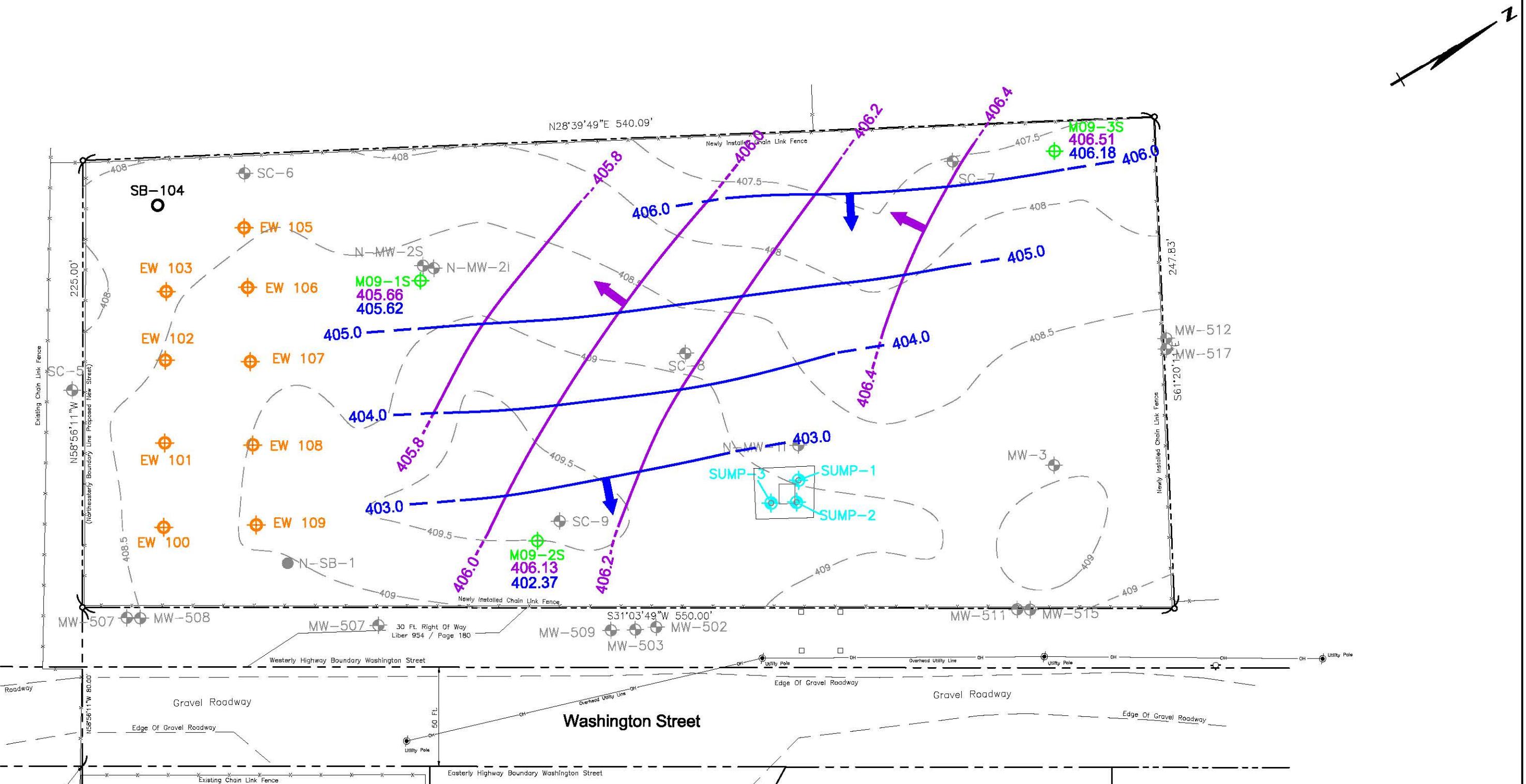


REV #	DATE	DESCRIPTION	APPD

REFERENCE:
• SHEEN NOTED FOR TWO OR MORE EVENTS.

ISSUE DATE:
KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15108

SITE PLAN PROJECT NO: 09-858
FIGURE 2



LEGEND

— — — — — SITE PROPERTY BOUNDARY

— * — * — * — * — CHAIN LINK FENCE

EDGE OF ROAD

— — — — — EDGE OF GRAVEL ROAD

ABANDONED MONITORING WEL

SOIL BOR

**SHALLOW ZONE DNAPL
MONITORING LOCATION**

INTERMEDIATE ZONE DNAP MONITORING LOCATION

SHALLOW UNIT GROUNDWATER MONITORING

WELL

— 406.2

POTENTIOMETRIC
SURFACE ELEVATION
MAY 26, 2009

POTENTIOMETRIC SURFACE
ELEVATION DECEMBER 1,
2009 (DASHED WHERE
INFERRED)

GROUNDWATER FLOW DIRECTION



BEAZER EAST, INC.
MURKIN, PENNSYLVANIA

09 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

**ENTIOMETRIC SURFACE
CONTOUR MAP—
SHALLOW UNIT**

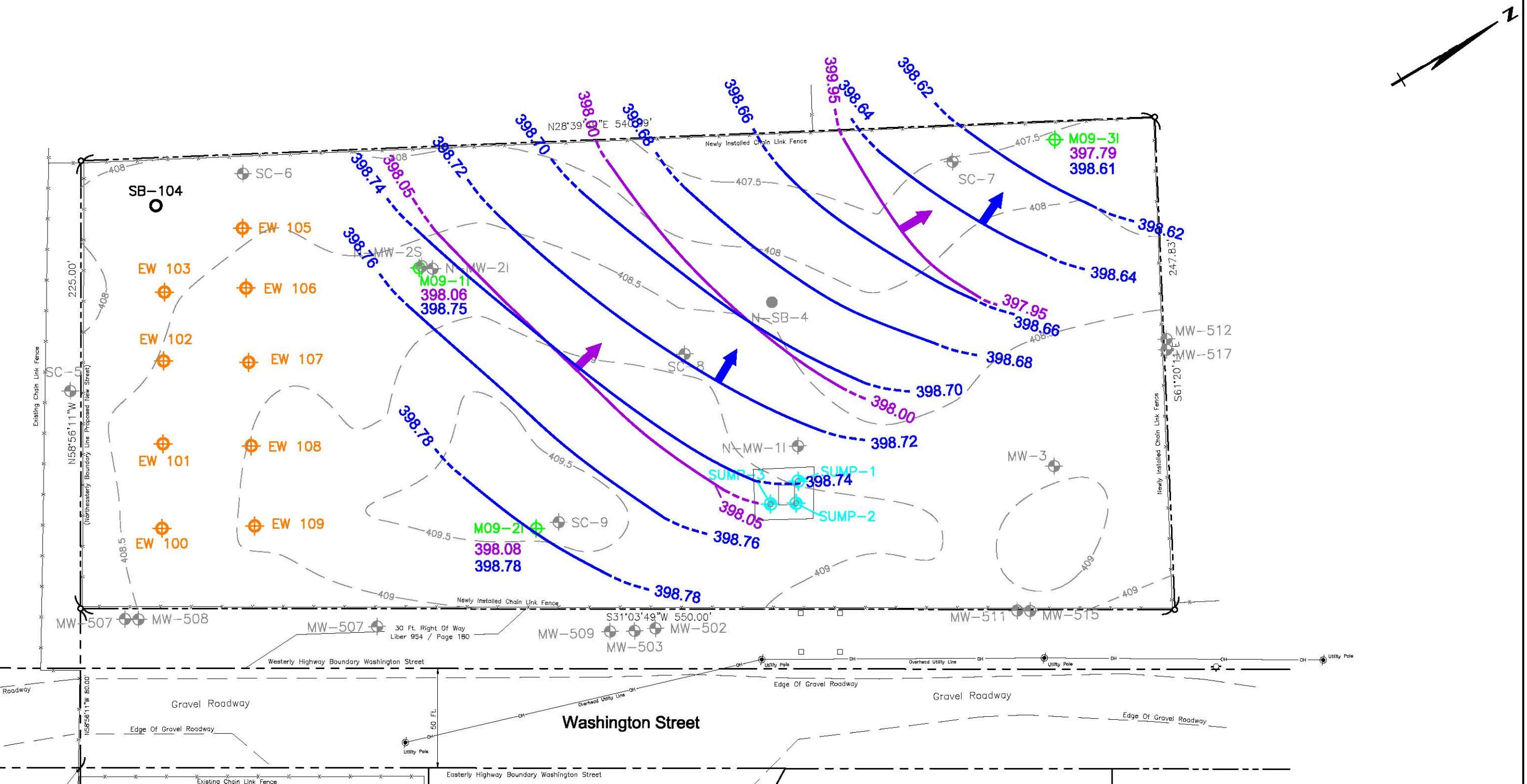
PROJECT NO: 09-558
FIGURE 3

REV #	DATE	DESCRIPTION

REFERENCE

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106



LEGEND

- SITE PROPERTY BOUNDARY

* * * CHAIN LINK FENCE

**SHALLOW ZONE DNAP
MONITORING LOCATION**

POTENTIOMETRIC
SURFACE ELEVATION
MAY 26, 2009

- EDGE OF ROAD

— — — GROUND SURFACE ELEVATION
CONTOUR INTERVAL

**INTERMEDIATE ZONE DNA
MONITORING LOCATION**

POTENTIOMETRIC SURFACE
ELEVATION DECEMBER 1,
2009 (DASHED WHERE
INFERRED)

- EDGE OF GRAVEL ROAD

ABANDONED MONITORING WEBSITES

**INTERMEDIATE ZONE
GROUNDWATER MONITORING
WELL**

GROUNDWATER FLOW DIRECTION

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

The logo for KEY Environmental Incorporated. It features the word "KEY" in large, bold, yellow letters. To the right of "KEY", the words "ENVIRONMENTAL" and "INCORPORATED" are stacked vertically in smaller, black, sans-serif font.

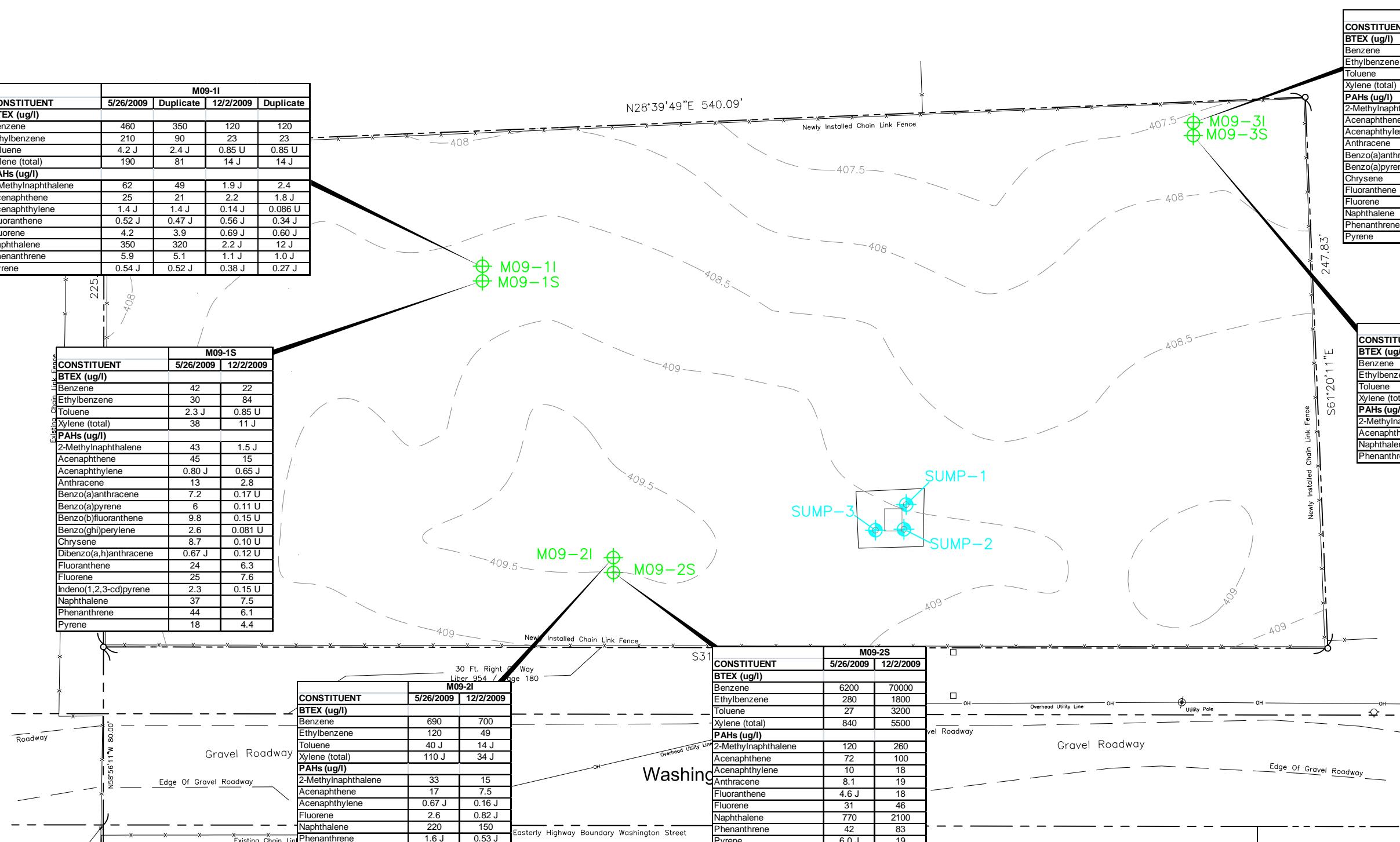
09 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

POTENTIOMETRIC SURFACE
CONTOUR MAP—
INTERMEDIATE ZONE

				REFERENCE:
REV #	DATE	DESCRIPTION	APPD	

CONSTITUENT	M09-1I			
	5/26/2009	Duplicate	12/2/2009	Duplicate
BTEX (ug/l)				
Benzene	460	350	120	120
Ethylbenzene	210	90	23	23
Toluene	4.2 J	2.4 J	0.85 U	0.85 U
Xylene (total)	190	81	14 J	14 J
PAHs (ug/l)				
2-Methylnaphthalene	62	49	1.9 J	2.4
Acenaphthene	25	21	2.2	1.8 J
Acenaphthylene	1.4 J	1.4 J	0.14 J	0.066 U
Fluoranthene	0.52 J	0.47 J	0.56 J	0.34 J
Fluorene	4.2	3.9	0.69 J	0.60 J
Naphthalene	350	320	2.2 J	12 J
Phenanthrene	5.9	5.1	1.1 J	1.0 J
Pyrene	0.54 J	0.52 J	0.38 J	0.27 J

CONSTITUENT	M09-1S	
	5/26/2009	12/2/2009
BTEX (ug/l)		
Benzene	42	22
Ethylbenzene	30	84
Toluene	2.3 J	0.85 U
Xylene (total)	38	11 J
PAHs (ug/l)		
2-Methylnaphthalene	43	1.5 J
Acenaphthene	45	15
Acenaphthylene	0.80 J	0.65 J
Anthracene	13	2.8
Benz(a)anthracene	7.2	0.17 U
Benz(a)pyrene	6	0.11 U
Benz(b)fluoranthene	9.8	0.15 U
Benz(ghi)perylene	2.6	0.081 U
Chrysene	8.7	0.10 U
Dibenz(a,h)anthracene	0.67 J	0.12 U
Fluoranthene	24	6.3
Fluorene	25	7.6
Indeno(1,2,3-cd)pyrene	2.3	0.15 U
Naphthalene	37	7.5
Phenanthrene	44	6.1
Pyrene	18	4.4



M09-3I		
CONSTITUENT	5/27/2009	12/2/2009
BTEX (ug/l)		
Benzene	870	NS
Ethylbenzene	160	NS
Toluene	49 J	NS
Xylene (total)	180	NS
PAHs (ug/l)		
2-Methylnaphthalene	250	NS
Acenaphthene	140	NS
Acenaphthylene	6.9	NS
Anthracene	12	NS
Benz(a)anthracene	2.8	NS
Benz(a)pyrene	0.71 J	NS
Chrysene	2.2	NS
Fluoranthene	20	NS
Fluorene	86	NS
Naphthalene	6600	NS
Phenanthrene	120	NS
Pyrene	13	NS

M09-3S		
CONSTITUENT	5/27/2009	12/2/2009
BTEX (ug/l)		
Benzene	1400	NS
Ethylbenzene	95 J	NS
Toluene	670	NS
Xylene (total)	300	NS
PAHs (ug/l)		
2-Methylnaphthalene	550 J	NS
Acenaphthene	240 J	NS
Naphthalene	11000	NS
Phenanthrene	260 J	NS

LEGEND

- SITE PROPERTY BOUNDARY
- EDGE OF ROAD
- EDGE OF GRAVEL ROAD
- CHAIN LINK FENCE
- SUMP-1
- SHALLOW ZONE DNAPL MONITORING LOCATION
- 409 — GROUND SURFACE ELEVATION CONTOUR INTERVAL
- M09-1
- SHALLOW AND INTERMEDIATE ZONE GROUNDWATER MONITORING WELL PAIR

0 50 100 FEET

BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA

DRWN: SCC	DATE: 01/04/10
CHKD: RMB	DATE: 01/04/10
APPD: MRL	DATE: 01/04/10
SCALE:	AS SHOWN

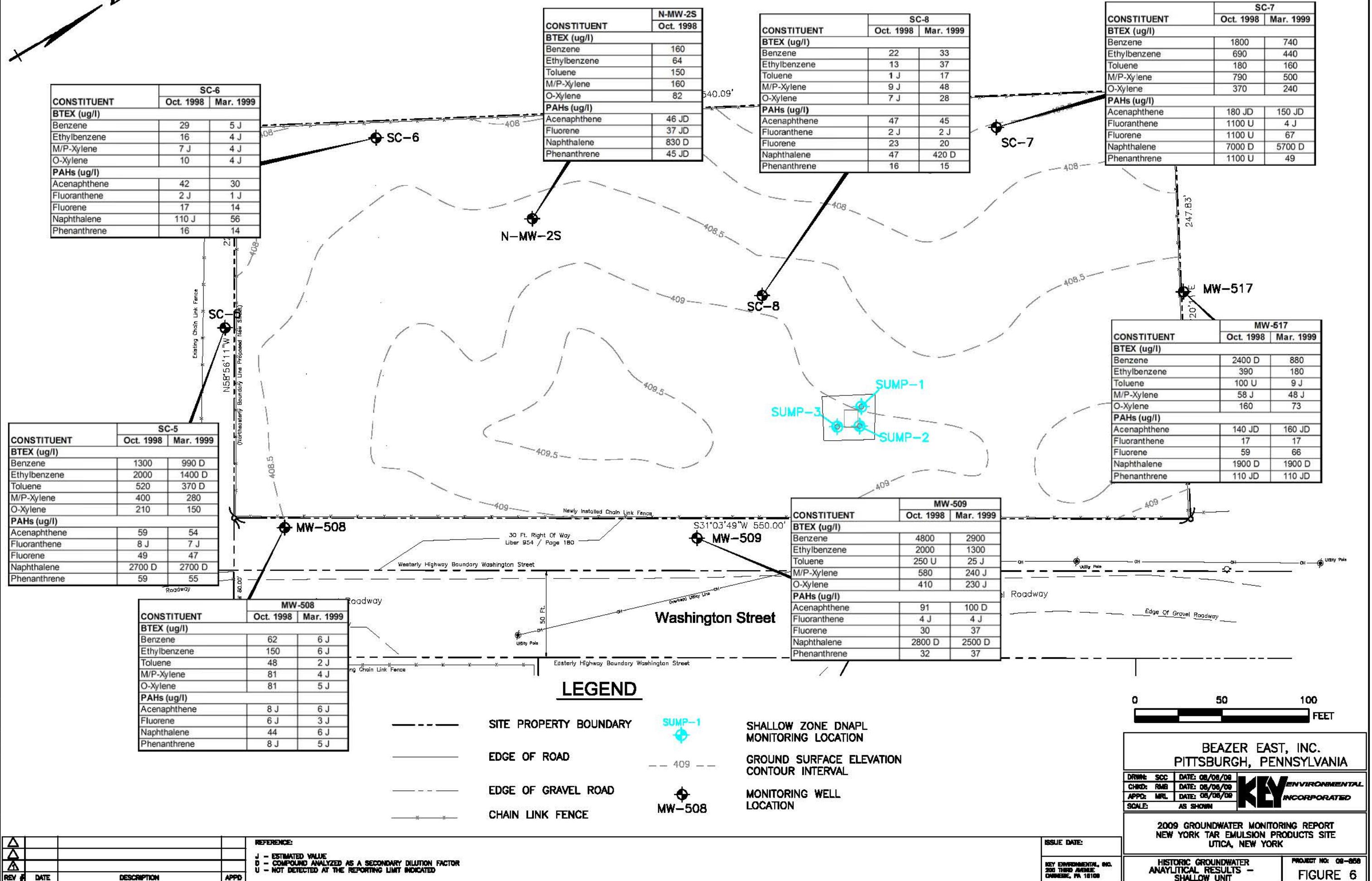
KEY ENVIRONMENTAL INCORPORATED

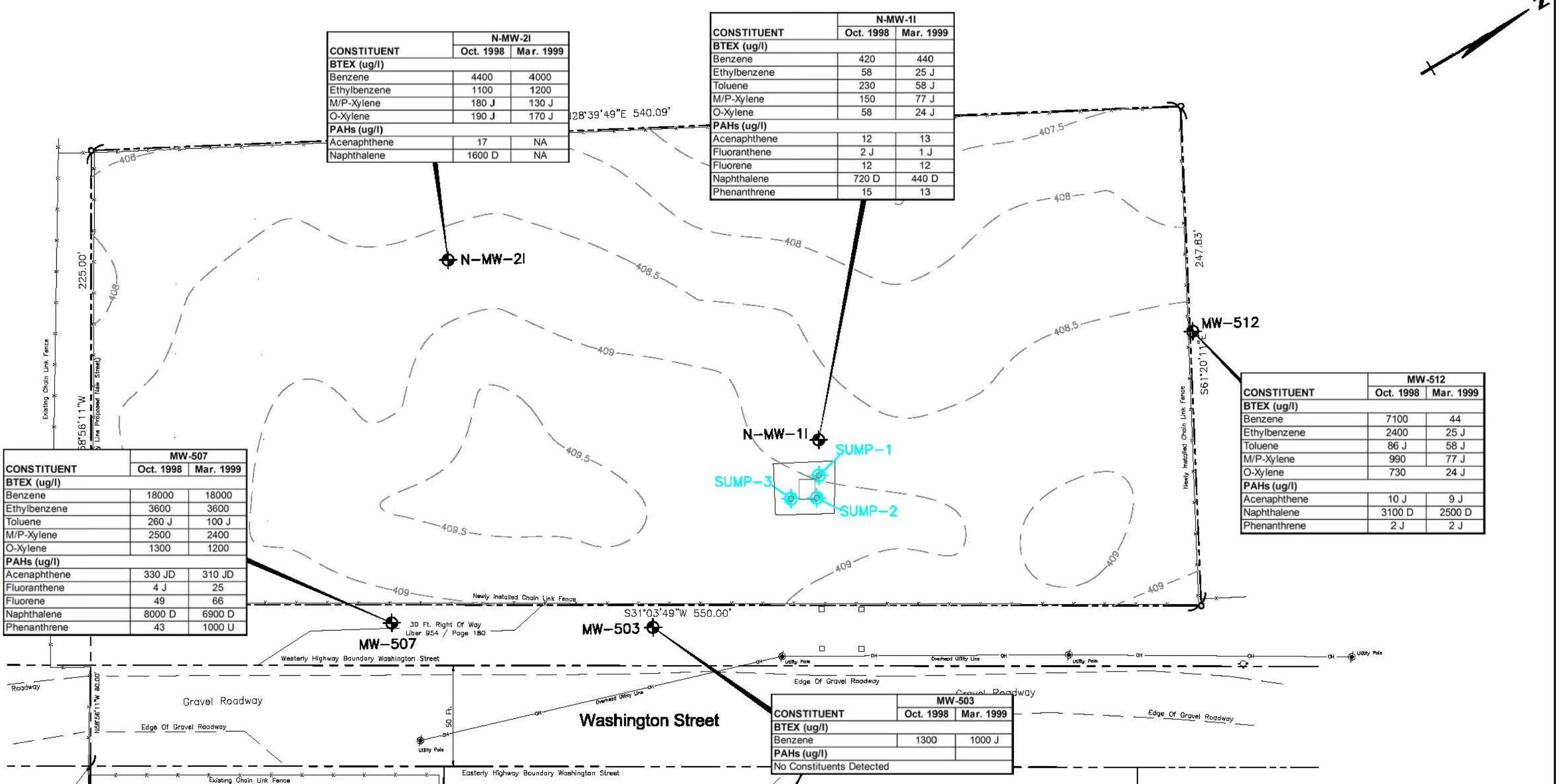
2009 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

REV #	DATE	DESCRIPTION	APPD	ISSUE DATE:
GROUNDWATER ANALYTICAL RESULTS SHALLOW UNIT AND INTERMEDIATE ZONE				PROJECT NO: 09-858 FIGURE 5

△		
△		
△		

REFERENCE:
J - ESTIMATED VALUE
U - NOT DETECTED AT THE REPORTING LIMIT INDICATED
NS - NOT SAMPLED DUE TO THE PRESENCE OF DNAPL





REV #	DATE	DESCRIPTION	APPD

REFERENCE:

J - ESTIMATED VALUE
D - COMPOUND ANALYZED AS A SECONDARY DILUTION FACTOR
NA - NOT DETECTED AT THE REPORTING LIMIT INDICATED
NA - NOT ANALYZED

ISSUE DATE:
KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
ONTARIO, PA 15106

PROJECT NO. 08-808
HISTORICAL GROUNDWATER ANALYTICAL RESULTS - INTERMEDIATE ZONE
FIGURE 7

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
DRWNE: SCC DATE: 08/06/08
CHKD: RMB DATE: 08/06/08
APPD: MRL DATE: 08/06/08
SCALE: AS SHOWN
KEY ENVIRONMENTAL INCORPORATED

2009 GROUNDWATER MONITORING REPORT
NEW YORK TAR EMULSION PRODUCTS SITE
UTICA, NEW YORK

ATTACHMENT A

DNAPL MEASUREMENTS AND RECOVERY

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-100 TOWP: 411.21

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
7/31/2006	7:30	43.95	10.55	400.66	N/D	N/A							Tar like odor to well water but no product
7/31/2006	13:10	43.95	10.70	400.51	N/D	N/A							Soft well bottom
7/31/2006	14:30	43.95	10.75	400.46	N/D	N/A							Very slight trace DNAPL on probe tip
8/1/2006	7:25	43.95	11.23	399.98	Sl. Trace	N/A							Soft well bottom
8/1/2006	13:56	43.95	11.35	399.86	Sl. Trace	N/A							Very slight trace DNAPL on probe tip
8/1/2006	15:15	43.95	11.38	399.83	Sl. Trace	N/A							Soft well bottom
8/2/2006	7:15	43.95	11.66	399.55	Sl. Trace	N/A							Very slight trace DNAPL on probe tip
8/2/2006	11:37	43.95	11.73	399.48	Sl. Trace	N/A							Soft well bottom
8/2/2006	15:15	43.95	11.77	399.44	Sl. Trace	N/A							Very slight trace DNAPL on probe tip
8/3/2006	7:30	43.95	11.84	399.37	N/D	N/A							Soft well bottom
8/3/2006	9:30	43.95	11.87	399.34	Sl. Trace	N/A							No trace of DNAPL
8/3/2006	12:25	43.95	11.89	399.32	Sl. Trace	N/A							Very slight trace DNAPL on probe tip
8/3/2006	14:45	43.95	11.89	399.32	Sl. Trace	N/A							Soft well bottom
8/4/2006	6:20	43.95	11.86	399.35	N/D	N/A							Very slight trace DNAPL on probe tip
8/4/2006	8:45	43.95	11.9	399.31	N/D	N/A							Soft well bottom
8/4/2006	10:45	43.95	11.88	399.33	N/D	N/A							Very slight trace DNAPL on probe tip
8/4/2006	13:45	43.95	11.81	399.4	N/D	N/A							Soft well bottom
8/10/2006	8:31	43.95	12.33	398.88	N/D	N/A							Very slight trace DNAPL on probe tip
8/17/2006	14:02	43.95	12.84	398.37	Sl. Trace	N/A							Soft well bottom
8/23/2006	13:55	43.95	12.72	398.49	Sl. Trace	N/A							No trace of DNAPL
9/20/2006	14:44	43.95	12.90	398.31	Sl. Trace	N/A							Very sl. trace on probe tip
10/26/2006	15:05	43.95	9.88	401.33	N/D	N/A							Very sl. trace on probe tip
11/29/2006	14:40	43.95	12.04	399.17	Sl. Trace	N/A							Very sl. trace on probe tip
12/27/2006	12:35	43.95	10.59	400.62	Sl. Trace	N/A							Very slight trace DNAPL on probe tip
1/23/2007	15:10	43.95	12.30	398.91	Trace	N/A							Soft well bottom
3/21/2007	15:45	43.95	12.46	398.75	Trace	N/A							Very slight trace DNAPL on probe tip
4/26/2007	15:57	43.95	10.96	400.25	Trace	N/A							Soft well bottom
5/30/2007	14:55	43.95	12.67	398.54	Trace	N/A							Very slight trace DNAPL on probe tip
6/19/2007	16:13	43.95	13.00	398.21	Trace	N/A							Very slight trace DNAPL on probe tip
7/17/2007	17:40	43.95	13.15	398.06	43.85	0.07							Soft well bottom
8/21/2007	16:06	43.95	13.58	397.63	43.93	0.01	16:06	0.03	16:06	13.56	Trace		Very slight trace DNAPL on probe tip
9/27/2007	18:07	43.95	13.34	397.87	Trace								Soft well bottom
10/27/2007	12:10	43.95	12.78	398.43	43.8	0.15							Very slight trace DNAPL on probe tip
11/18/2007	9:52	43.95	11.59	399.62	Trace								Soft well bottom
12/8/2007	10:58	43.95	12.45	398.76	N/D								Very slight trace DNAPL on probe tip
1/10/2008	12:26	43.95	12.10	399.11	Trace								Soft well bottom
2/14/2008	15:07	43.95	11.01	400.2	43.81	0.14							Very slight trace DNAPL on probe tip
3/27/2008	15:16	43.95	11.28	399.93	43.85	0.1							Soft well bottom
4/22/2008	15:46	43.95	12.23	398.98	43.6	0.35	17:00	0.15		12.58	Trace		Very slight trace DNAPL on probe tip
5/22/2008	10:03	43.95	12.74	398.47	Trace								Soft well bottom
6/26/2008	13:37	43.95	12.81	398.4	Trace								Very slight trace DNAPL on probe tip
7/29/2008	14:20	43.95	12.29	398.92	43.37	0.3	15:55	0.03		12.59	Trace		Very slight trace DNAPL on probe tip
8/28/2008	16:05	43.67	12.45	398.76	43.38	0.29							Soft well bottom
9/23/2008	15:30	43.67	13.01	398.2	43.51	0.16							Very slight trace DNAPL on probe tip
10/30/2008	16:16	43.67	10.21	401.0	43.09	0.38	11:05	0.19	11:05	11.19	Trace		Very slight trace DNAPL on probe tip
11/21/2008	9:05	43.67	12.90	398.31	43.26	N/A							Soft well bottom
12/17/2008	16:08	43.67	10.73	400.48	Trace	N/A							Very slight trace DNAPL on probe tip
2/19/2009	14:29	43.67	12.11	399.10	42.99	0.44				12.75	Trace		Very slight trace DNAPL on probe tip
3/25/2009	15:14	43.67	12.31	398.90	42.88	0.52				18.42	Trace		Very slight trace DNAPL on probe tip
4/23/2009	17:19	43.67	12.04	399.17	43.33	0.33				12.75	Trace		Very slight trace DNAPL on probe tip
5/26/2009	17:08	43.67	12.91	398.30	43.57	N/A				12.75	Trace		Very slight trace DNAPL on probe tip
6/24/2009	16:43	43.67	12.36	398.85	42.82	0.56				14.80	Trace		Very slight trace DNAPL on probe tip
7/30/2009	16:03	43.67	13.09	398.12	Trace	N/A							Very slight trace DNAPL on probe tip
8/31/2009	14:41	43.67	12.43	398.78	43.38	N/A							Very slight trace DNAPL on probe tip
9/21/2009	15:22	43.67	13.23	397.98	43.08	0.39				14.45	Trace		Very slight trace DNAPL on probe tip
10/21/2009	15:33	43.67	12.71	398.50	Trace	N/A							Very slight trace DNAPL on probe tip
11/18/2009	15:15	43.67	11.91	399.30	Trace	N/A							Very slight trace DNAPL on probe tip
12/1/2009	14:00	43.67	12.22	398.99	Trace	N/A							Very slight trace DNAPL on probe tip
1/13/2010	13:42	43.67	12.74	398.47	Trace	N/A							Very slight trace DNAPL on probe tip

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-101 TOWP: 411.38

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
7/31/2006	7:35	39.89	10.79	400.59	39.59	*	10:00-10:30	0.08	10:35	39.89	10.88	trace	*No discernible thickness
7/31/2006									13:15	39.89	10.95	trace	DNAPL layer on top of thick silty water.
7/31/2006									14:35	39.89	10.97	trace	
8/1/2006	7:30	39.89	11.49	399.89	trace	N/A	8:30-10:33	0.08	10:40	40.32	11.62	Sl. Trace	Pumped ~7 gal. of viscous silty water along w/DNAPL
8/1/2006									15:18	40.28	11.63	Sl. Trace	
8/2/2006	7:20	40.29	11.92	399.46	trace	N/A	8:10-09:35	0.02	9:40	40.56	12.03	trace	Pumped ~5 gal. of viscous silty water from bottom of well along with DNAPL
8/2/2006									11:42	40.56	12.00	trace	
8/2/2006									15:17	40.56	12.05	trace	
8/3/2006	7:36	40.56	12.13	399.25	trace	N/A							
8/3/2006	9:35	40.56	12.15	399.23	trace	N/A							
8/3/2006	12:30	40.56	12.16	399.22	trace	N/A							
8/3/2006	14:50	40.56	12.16	399.22	trace	N/A							
8/3/2006	6:24	40.56	12.18	399.2	trace	N/A							
8/4/2006	8:47	40.56	12.18	399.2	trace	N/A							
8/4/2006	10:48	40.56	12.12	399.26	trace	N/A							
8/4/2006	13:48	40.56	12.04	399.34	trace	N/A							
8/10/2006	8:33	40.56	12.60	398.78	trace	N/A							
8/17/2006	14:05	40.56	13.06	398.32	trace	N/A							
8/23/2006	13:58	40.56	13.02	398.36	trace	N/A							
9/20/2006	14:46	40.56	13.17	398.21	40.54	0.01							
10/26/2000	15:12	40.56	11.02	400.36	Sl. Trace	N/A							
11/29/2006	14:43	40.56	12.59	398.79	39.96	0.39							
12/27/2006	12:38	40.56	10.76	400.62	39.16	0.91	12:38	0.47	12:38		10.81	trace	
1/23/2007	15:14	40.56	12.61	398.77	Trace	N/A							
3/21/2007	16:10	40.56	12.79	398.59	Trace	N/A							
4/26/2007	16:21	40.56	11.2	400.18	Trace	N/A							
5/30/2007	15:00	40.56	12.97	398.41	38.85	1.12	15:00	0.55	15:00		13.55	39.76	Used bailer to remove DNAPL
6/19/2007	16:15	40.56	13.3	398.08	39.07	0.97	16:15	1	16:15		13.46	0.07	
7/17/2007	17:48	40.56	13.43	397.95	40.2	0.24	17:48	0.4	17:48		13.41	Trace	
8/21/2007	16:14	40.56	13.53	397.85	39.37	0.12	16:14	0.25	16:14		13.34	Trace	
9/27/2007	18:11	40.56	14.67	396.71	trace								
10/27/2007	12:20	40.56	12.4	398.98	40.22	0.34		0.5			12.22	Trace	
11/18/2007	9:56	40.56	11.78	399.6	40.43	0.13							
12/8/2007	11:03	40.56	12.61	398.77	40.36	0.20							
1/10/2008	12:35	40.56	10.35	401.03	40.39	0.17							
2/14/2008	15:12	40.56	11.14	400.24	39.86	0.70	16:00	0.525			11.67	Trace	
3/27/2008	15:21	40.56	11.51	399.87	40.45	0.11							
4/22/2008	15:51	40.56	12.61	398.77	40.41	0.15							
5/22/2008	10:12	40.56	13.01	398.37	40.26	0.30	14:50	0.1959			12.70	Trace	
6/26/2008	13:45	40.56	13.11	398.27	40.46	0.10							
7/29/2008	14:26	40.56	12.75	398.63	39.95	0.61	17:00	0.13				Trace	
8/28/2008	16:10	40.56	13.21	398.17	39.86	0.70		0.36			13.91	Trace	
9/23/2008	15:35	40.56	13.27	398.11	40.45	0.11							
10/30/2008	16:23	40.56	10.38	401.00	40.15	0.27	10:24	0.22	10:24		11.19	Trace	
11/21/2008	9:10	40.56	12.11	399.27	40.41	N/A		N/A			N/A	N/A	
12/17/2008	16:13	40.56	10.68	400.70	40.41	N/A		N/A			N/A	N/A	
2/19/2009	14:34	40.56	12.38	399.00	40.46	N/A		N/A			N/A	N/A	
3/25/2009	15:21	40.56	12.48	398.9	40.48	N/A		N/A			N/A	N/A	
4/23/2009	17:25	40.56	12.28	399.1	40.27	0.20		0.31			13.02	Trace	
5/26/2009	17:13	40.56	13.11	398.27	40.46	N/A		N/A					
6/24/2009	16:50	40.56	12.59	398.79	40.25	0.22		0.13			13.89	Trace	
7/30/2009	16:11	40.56	13.30	398.08	40.41	N/A		N/A			N/A	N/A	
8/31/2009	14:44	40.56	12.65	398.73	40.21	0.23		0.50			13.39	Trace	
9/21/2009	15:28	40.56	13.50	397.88	40.33	N/A		N/A			N/A	N/A	
10/21/2009	15:38	40.56	12.91	398.47	40.10	0.30		0.30			14.00	Trace	
11/18/2009	15:21	40.56	12.24	399.14	39.94	0.40		0.25			13.00	Trace	
12/1/2009	14:05	40.56	12.49	398.89	Trace	N/A		N/A			N/A	Trace	
1/13/2010	13:48	40.56	13.00	398.38	Trace	N/A		N/A			N/A	Trace	

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-102 TOWP: 411.13

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging				Comments/Notes		
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
7/31/2006	7:55	40.80	10.43	400.7	N/D	N/A							Tar like odor but no product
7/31/2006	13:20	40.80	10.56	400.57	N/D	N/A							Soft well bottom
7/31/2006	14:40	40.80	10.58	400.55	N/D	N/A							
8/1/2006	7:35	40.80	11.05	400.08	N/D	N/A							Tar like odor but no product
8/1/2006	14:00	40.80	11.18	399.95	N/D	N/A							Soft well bottom
8/1/2006	15:25	40.80	11.21	399.92	N/D	N/A							
8/2/2006	7:30	40.99	11.48	399.65	N/D	N/A							Tar like odor but no product
8/2/2006	11:45	40.99	11.56	399.57	N/D	N/A							Soft well bottom
8/2/2006	15:20	41.05	11.60	399.53	N/D	N/A							
8/3/2006	7:42	41.05	11.67	399.46	N/D	N/A							Tar like odor but no product
8/3/2006	9:40	41.05	11.73	399.4	N/D	N/A							Soft well bottom
8/3/2006	12:35	41.05	11.75	399.38	N/D	N/A							
8/3/2006	14:55	41.05	11.75	399.38	N/D	N/A							
8/4/2006	6:30	41.05	11.78	399.35	N/D	N/A							Tar like odor but no product
8/4/2006	8:50	41.05	11.79	399.34	N/D	N/A							Soft well bottom
8/4/2006	10:50	41.05	11.76	399.37	N/D	N/A							
8/4/2006	13:50	41.05	11.73	399.4	N/D	N/A							
8/10/2006	8:35	41.05	12.18	398.95	N/D	N/A							
8/17/2006	14:09	41.05	12.68	398.45	N/D	N/A							
8/23/2006	14:01	41.05	12.66	398.47	N/D	N/A							
9/20/2006	14:56	41.05	12.78	398.35	N/D	N/A							
10/26/2006	15:22	41.05	10.49	400.64	N/D	N/A							
11/29/2006	15:02	41.05	12.14	398.99	N/D	N/A							
12/27/2006	12:40	41.05	10.53	400.6	N/D	N/A							
1/23/2007	15:20	41.05	12.14	398.99	N/D	N/A							
3/21/2007	16:07	41.05	12.2	398.93	N/D	N/A							
4/26/2007	16:02	41.05	10.84	400.29	N/D	N/A							
5/30/2007	15:05	41.05	12.56	398.57	N/D	N/A							
6/19/2007	16:50	41.05	12.91	398.22	Trace	N/A							
7/17/2007	18:04	41.05	13	398.13	Trace	N/A							
8/21/2007	16:37	41.05	13.11	398.02	N/D	N/A							
9/27/2007	18:16	41.05	13.19	397.94	N/D	N/A							
10/27/2007	12:26	41.05	12.03	399.1	N/D	N/A							
11/18/2007	10:01	41.05	11.33	399.8	N/D	N/A							
12/8/2007	11:09	41.05	13.25	397.88	N/D	N/A							
1/10/2008	13:00	41.05	10.09	401.04	N/D	N/A							
2/14/2008	15:17	41.05	10.91	400.22	Trace	N/A							
3/27/2008	15:27	41.05	11.23	399.9	N/D	N/A							
4/22/2008	15:56	41.05	12.21	398.92	N/D	N/A							
5/22/2008	10:17	41.05	12.57	398.56	N/D	N/A							
6/26/2008	13:53	41.05	12.75	398.38	N/D	N/A							
7/29/2008	14:31	41.05	12.33	398.8	N/D	N/A							
8/28/2008	16:14	41.05	12.85	398.28	N/D	N/A							
				411.13									
10/30/2008	16:27	40.76	10.18	400.95	N/D	N/A							
11/21/2008	9:15	40.76	12.11	399.02	N/D	N/A							
12/17/2008	16:17	40.76	10.6	400.53	N/D	N/A							
2/19/2009	14:39	40.76	12.00	399.13	N/D	N/A							
3/25/2009	12:28	40.76	12.25	398.88	N/D	N/A							
4/23/2009	17:30	40.76	11.93	399.2	N/D	N/A							
5/26/2009	17:19	40.76	12.78	398.35	N/D	N/A							
6/24/2009	17:02	40.76	12.19	398.94	N/D	N/A							
7/30/2009	16:17	40.76	12.96	398.17	N/D	N/A							
8/31/2009	14:48	40.76	12.32	398.81	N/D	N/A							
9/21/2009	15:34	40.76	13.14	397.99	N/D	N/A							
10/21/2009	15:42	40.76	12.61	398.52	N/D	N/A							
11/18/2009	15:25	40.76	11.82	399.31	N/D	N/A							
12/1/2009	14:09	40.76	12.14	398.99	N/D	N/A							
1/13/2010	13:52	40.76	12.68	398.45	N/D	N/A							

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-103 TOWP: 411.05

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
7/31/2006	8:00	40.59	10.26	400.79	trace	N/A	11:05-11:15	0.02	11:20	40.71	10.34	trace	Observed an orange liquid
7/31/2006									13:25	40.71	10.37	trace	mixed with NAPL
7/31/2006									14:45	40.71	10.35	trace	
8/1/2006	7:40	40.71	10.70	400.35	trace	N/A	11:15-12:00	0.02	12:15	41.43	11.23	Sl. trace	Pumped ~2 gal. viscous
8/1/2006									15:30	41.43	10.86	trace	silty water along w/DNAPL
8/2/2006	7:35	4.92	11.15	399.9	Sl. trace	N/A	9:55-11:25	0.03	11:25	41.60	12.28	Sl. trace	Pumped ~3.5 gal. viscous
8/2/2006									11:50	41.60	11.65	Sl. trace	silty water from bottom of well along with DNAPL
8/2/2006									15:22	41.55	11.22	Sl. trace	
8/3/2006	7:45	41.51	11.31	399.74	trace	N/A	08:20-09:10	0.004	9:13	41.72	14.40	N/D	Pumped ~6 gal. viscous
8/3/2006	8:45	41.51	12.17	398.88	trace	N/A			12:37	41.55	11.40	trace	silty water from bottom of well along with DNAPL
8/3/2006									15:00	41.51	11.39	trace	
8/3/2006	6:33	41.51	11.43	399.62	trace	N/A							
8/4/2006	8:52	41.51	11.44	399.61	trace	N/A							
8/4/2006	10:52	41.51	11.43	399.62	trace	N/A							
8/4/2006	13:52	41.51	11.40	399.65	trace	N/A							
8/10/2006	8:38	41.51	11.80	399.25	trace	N/A							
8/17/2006	14:11	41.51	12.30	398.75	trace	N/A							
8/23/2006	14:03	41.51	12.25	398.80	trace	N/A							
9/20/2006	15:00	41.51	12.43	398.62	trace	N/A							
10/26/2006	15:25	41.51	10.06	400.99	Sl. trace	N/A							
11/29/2006	15:02	41.51	11.72	399.33	41.06	0.29							
12/27/2006	12:42	41.51	10.36	400.69	41.00	0.33	12:42	0.39	12:42		11.35	trace	
1/23/2006	15:25	41.51	11.71	399.34	Trace	N/A							
3/21/2007	16:12	41.51	11.72	399.33	Trace	N/A							
4/26/2007	16:30	41.51	10.55	400.50	39.92	1.00	16:30	0.7	16:30		11.59	41	
5/30/2007	15:27	41.51	12.24	398.81	40.48	0.67							
6/19/2007	16:52	41.51	12.59	398.46	39.61	1.24	16:52	1.2	16:52		13.49	0.02	
7/17/2007	18:12	41.51	12.71	398.34	41.10	0.27	18:12	0.75	18:12		12.66	Trace	
8/21/2007	16:42	41.51	12.84	398.21	40.64	0.57	16:42	0.75	16:42		11.97	Trace	
9/27/2007	18:20	41.51	12.89	398.16	40.67	0.84		0.6			12.27	Trace	
10/26/2007	12:30	41.51	11.66	399.39	40.79	0.72		0.8			10.94	Trace	
11/18/2007	10:05	41.51	11.12	399.93	40.77	0.45		0.3			11.3	Trace	
12/8/2007	11:12	41.51	11.98	399.07	40.70	0.81		1.1			10.17	Trace	
1/10/2008	13:03	41.51	10.10	400.95	40.69	0.82		0.8			10.82	Trace	
2/14/2008	15:20	41.51	10.74	400.31	40.63	0.88	17:30	0.7			11.62	Trace	
3/27/2008	15:30	10.93	11.23	399.82	40.61	0.90	16:33	1.1	19:25		11.82	Trace	
4/22/2008	16:02	41.51	11.82	399.23	41.11	0.40	18:25	0.3			12.22	Trace	
5/22/2008	10:22	41.51	12.28	398.77	40.56	0.95	14:10	0.6			11.33	Trace	
6/26/2008	13:58	41.51	12.48	398.57	40.61	0.90	17:05	1	17:45		13.3	Trace	
7/29/2008	14:35	41.51	12.03	399.02	40.64	0.87	18:10	0.4				Trace	
8/28/2008	16:18	41.51	12.56	398.49	40.64	0.87		0.75			13.43	Trace	
		41.51		411.05									
10/30/2008	16:32	41.39	10.15	400.90	39.94	0.88	9:07	0.92	9:21		12.19	Trace	
11/21/2008	9:19	41.39	11.43	399.62	40.94	0.29		0.30			11.68	Trace	
12/17/2008	16:21	41.39	10.60	400.45	40.50	0.58		1.0			10.90	Trace	
2/19/2009	14:42	41.39	11.72	399.33	39.82	1.03		2.0			12.95	Trace	
3/25/2009	15:32	41.39	11.59	399.46	40.50	0.58		0.45			16.43	Trace	
4/23/2009	17:34	41.39	11.68	399.37	40.40	0.65		0.25			13.25	Trace	
5/26/2009	17:21	41.39	12.43	398.62	40.33	0.69		1.5			14.18	Trace	
6/24/2009	17:06	41.39	11.86	399.19	40.50	0.58		1.25			14.08	Trace	
7/30/2009	16:22	41.39	12.77	398.28	40.35	0.68		1.5			16.25	Trace	
8/31/2009	14:54	41.39	12.11	398.94	40.51	0.57		0.75			13.95	Trace	
9/21/2009	15:38	41.39	12.98	398.07	40.51	0.57		0.58			14.90	Trace	
10/21/2009	15:47	41.39	12.38	398.67	40.48	0.59		0.95			14.14	Trace	
11/18/2009	15:28	41.39	11.61	399.44	40.49	0.59		0.48			13.10	Trace	
12/1/2009	14:13	41.39	11.89	399.16	39.90	N/A		N/A			N/A	Trace	
1/13/2010	13:57	41.39	12.41	398.64	40.40	0.73		1.05			13.64	Trace	Run time: 30 minutes
No January 2009 results due to heavy snowfall.													
Additional Comments:													

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-105 TOWP: 410.9

Well Dia.: 4"

Pre-PRemoval Gauging							Post-Removal Gauging						
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Pump Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	Comments/Notes
7/31/2006	8:15	40.51	10.35	400.55	N/D	N/A							Soft well bottom
7/31/2006	13:30	40.51	10.51	400.39	N/D	N/A							
7/31/2006	14:50	40.51	10.53	400.37	N/D	N/A							
8/1/2006	7:45	40.51	11.06	399.84	N/D	N/A							Soft well bottom
8/1/2006	14:05	40.51	11.19	399.71	N/D	N/A							
8/1/2006	15:35	40.51	11.21	399.69	N/D	N/A							
8/2/2006	7:38	40.51	11.50	399.4	N/D	N/A							Soft well bottom
8/2/2006	11:52	40.51	11.57	399.33	N/D	N/A							
8/2/2006	15:30	40.51	11.62	399.28	N/D	N/A							
8/3/2006	7:50	40.51	11.70	399.2	N/D	N/A							Soft well bottom
8/3/2006	9:50	40.51	11.72	399.18	N/D	N/A							
8/3/2006	12:40	40.51	11.74	399.16	N/D	N/A							
8/3/2006	15:03	40.51	11.73	399.17	N/D	N/A							
8/4/2006	6:35	40.51	11.76	399.14	N/D	N/A							Soft well bottom
8/4/2006	8:54	40.51	11.74	399.16	N/D	N/A							
8/4/2006	10:54	40.51	11.69	399.21	N/D	N/A							
8/4/2006	13:54	40.51	11.61	399.29	N/D	N/A							
8/10/2006	8:51	40.51	11.16	399.74	N/D	N/A							
8/17/2006	14:15	40.51	12.61	398.29	N/D	N/A							
8/23/2006	14:06	40.51	12.58	398.32	N/D	N/A							
9/20/2006	15:04	40.51	12.74	398.16	N/D	N/A							
10/26/2006	15:29	40.51	10.63	400.27	N/D	N/A							
11/29/2006	15:05	40.51	12.15	398.75	N/D	N/A							
12/27/2006	12:55	40.51	10.27	400.63	N/D	N/A							
1/23/2007	15:30	40.51	12.16	398.74	N/D	N/A							
3/21/2007	16:05	40.51	12.3	398.6	Trace	N/A							
4/26/2007	16:05	40.51	11.73	399.17	Trace	N/A							
5/30/2007	15:10	40.51	12.5	398.4	Slight Trace	N/A							
6/19/2007	16:57	40.51	12.87	398.03	Trace	N/A							
7/17/2007	18:43	40.51	12.96	397.94	Trace	N/A							
8/21/2007	16:51	40.51	13.09	397.81	N/D	N/A							
9/27/2007	18:25	40.51	13.07	397.83	N/D	N/A							
10/27/2007	12:38	40.51	11.59	399.31	N/D	N/A							
11/18/2007	10:09	40.51	11.21	399.69	N/D	N/A							
12/8/2007	11:17	40.51	12.12	398.78	N/D	N/A							
1/10/2008	13:08	40.51	9.85	401.05	N/D	N/A							
2/14/2008	15:23	40.51	10.69	400.21	N/D	N/A							
3/27/2008	15:31	40.51	11.03	399.87	N/D	N/A							
4/22/2008	15:08	40.51	12.16	398.74	N/D	N/A							
5/22/2008	10:27	40.51	12.54	398.36	Trace	N/A							
6/26/2008	14:08	40.51	12.64	398.26	Trace	N/A							
7/29/2008	14:43	40.19	12.26	398.64	Trace	N/A							
8/28/2008	16:23	40.19	12.78	398.12	Trace	N/A							
				40.19		410.90							
10/30/2008	16:52	40.19	9.89	401.01	Trace	N/A							
11/21/2008	9:23	40.19	11.68	399.22	Trace	N/A							
12/17/2008	16:26	40.19	10.20	400.70	N/D	N/A							
2/19/2009	14:48	40.19	11.91	398.99	N/D	N/A							
3/25/2009	15:37	40.19	12.1	398.80	N/D	N/A							
4/23/2009	17:38	40.19	11.84	399.06	Trace	N/A							
5/26/2009	17:27	40.19	12.17	398.73	Trace	N/A							
6/24/2009	17:11	40.19	12.15	398.75	Trace	N/A							
7/30/2009	16:29	40.19	12.89	398.01	Trace	N/A							
8/31/2009	14:58	40.19	12.25	398.65	Trace	N/A							
9/21/2009	15:43	40.19	13.10	397.80	Trace	N/A							
10/21/2009	15:51	40.19	12.56	398.34	Trace	N/A							
11/18/2009	15:34	40.19	11.71	399.19	Trace	N/A							
12/1/2009	14:19	40.19	12.05	398.85	Trace	N/A							
1/13/2010	14:03	40.19	12.60	398.30	Trace	N/A							
Additional Comments:							No January 2009 results due to heavy snowfall.						

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-106 TOWP: 411.32

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging						
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Pump Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	Comments/Notes
7/31/2006	8:25	38.11	10.84	400.48	N/D	N/A							Tar like odor but no product
7/31/2006	13:35	38.11	10.99	400.33	N/D	N/A							Soft well bottom
7/31/2006	14:55	38.11	11.03	400.29	N/D	N/A							
8/1/2006	7:55	38.11	11.56	399.76	N/D	N/A							Tar like odor but no product
8/1/2006	14:05	38.11	11.68	399.64	N/D	N/A							Soft well bottom
8/1/2006	15:40	38.11	11.70	399.62	N/D	N/A							
8/2/2006	7:40	38.11	12.01	399.31	N/D	N/A							Tar like odor but no product
8/2/2006	11:55	38.11	12.06	399.26	N/D	N/A							Soft well bottom
8/2/2006	15:33	38.11	12.11	399.21	N/D	N/A							
8/3/2006	7:55	38.11	12.16	399.16	N/D	N/A							Tar like odor but no product
8/3/2006	9:55	38.11	12.21	399.11	N/D	N/A							Soft well bottom
8/3/2006	12:45	38.11	12.22	399.1	N/D	N/A							
8/3/2006	15:06	38.11	12.23	399.09	N/D	N/A							
8/4/2006	6:38	38.11	12.24	399.08	N/D	N/A							Tar like odor but no product
8/4/2006	8:55	38.11	12.24	399.08	N/D	N/A							Soft well bottom
8/4/2006	10:55	38.11	12.16	399.16	N/D	N/A							
8/4/2006	13:55	38.11	12.08	399.24	N/D	N/A							
8/10/2006	8:53	38.11	12.65	398.67	N/D	N/A							
8/17/2006	14:18	38.11	13.10	398.22	N/D	N/A							
8/23/2006	14:08	38.11	13.07	398.25	N/D	N/A							
9/20/2006	15:07	38.11	13.21	398.11	N/D	N/A							
10/26/2006	15:31	38.11	11.12	400.2	N/D	N/A							
11/29/2006	15:08	38.11	12.60	398.72	N/D	N/A							
12/27/2006	12:57	38.11	10.75	400.57	N/D	N/A							
1/23/2007	15:33	38.11	12.62	398.7	N/D	N/A							
3/21/2007	16:00	38.11	12.81	398.51	N/D	N/A							
4/26/2007	16:10	38.11	11.22	400.1	N/D	N/A							
5/30/2007	15:15	38.11	12.98	398.34	N/D	N/A							
6/19/2007	16:59	38.11	13.33	397.99	N/D	N/A							
7/17/2007	18:50	38.11	13.42	397.9	N/D	N/A							
8/21/2007	16:56	38.11	13.50	397.82	N/D	N/A							
9/27/2007	18:29	38.11	14.65	396.67	N/D	N/A							
10/27/2007	12:43	38.11	12.47	398.85	N/D	N/A							
11/18/2007	10:12	38.11	11.63	399.69	N/D	N/A							
12/8/2007	11:19	38.11	12.59	398.73	Trace	N/A							
1/10/2008	13:11	38.11	10.30	401.02	N/D	N/A							
2/14/2008	15:31	38.11	11.16	400.16	N/D	N/A							
3/27/2008	16:00	38.11	11.51	399.81	N/D	N/A							
4/22/2008	16:12	38.11	12.16	399.16	Trace	N/A							
5/22/2008	10:36	38.11	13.02	398.3	N/D	N/A							
6/26/2008	14:16	38.11	13.10	398.22	Trace	N/A							
7/29/2008	14:48	38.01	12.71	398.61	Trace	N/A							
8/28/2008	16:32	38.11	13.27	398.05	37.73	0.28							
				37.92	411.32								
10/30/2008	16:56	37.92	10.29	401.03	37.87	N/A							
11/21/2008	9:27	37.92	12.15	399.17	37.72	N/A							
12/17/2008	16:31	37.92	10.60	400.72	Trace	N/A							
2/19/2009	14:53	37.92	12.40	398.92	Trace	N/A							
3/25/2009	15:41	37.92	12.51	398.81	N/D	N/A							
4/23/2009	17:43	37.92	12.19	399.13	37.83	N/A							
5/26/2009	17:30	37.92	13.14	398.18	37.72	N/A							
6/24/2009	17:15	37.92	12.65	398.67	37.50	0.27	0.35		13.58	Trace			
7/30/2009	16:36	37.92	13.30	398.02	Trace	N/A							
8/31/2009	15:02	37.92	12.64	398.68	37.82	N/A							
9/21/2009	15:47	37.92	13.49	397.83	37.82	N/A							
10/21/2009	15:54	37.92	12.90	398.42	37.82	N/A							
11/18/2009	15:38	37.92	12.11	399.21	37.82	0.10							
12/1/2009	14:23	37.92	12.45	398.87	37.64	N/A							
1/13/2010	14:09	37.92	13.00	398.32	37.94	N/A							
Additional Comments:		No January 2009 results due to heavy snowfall.											

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-107 TOWP: 411.52

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging						
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	Comments/Notes
7/31/2006	8:30	39.65	11.03	400.49	39.48	*	12:15-12:40	0.06	12:45	39.48	11.19	trace	* No discernible thickness
7/31/2006									13:38	39.48	11.17	trace	An orange liquid mixed with
7/31/2006									15:00	39.48	11.20	trace	DNAPL
8/1/2006	8:00	39.71	11.74	399.78	trace	N/A	12:50-13:35	0.08	13:40	40.40	11.89	trace	Pumped ~4 gal. viscous
8/1/2006									15:45	40.31	11.86	trace	silty water along w/DNAPL
8/2/2006	7:42	40.25	12.21	399.31	Sl. trace	N/A	13:10-14:15	0.02	15:00	40.88	12.35	N/D	Pumped ~9 gal. viscous
8/2/2006	11:58	40.25	12.27	399.25	Sl. trace	N/A			15:38	40.82	12.31	trace	silty water along w/DNAPL
8/3/2006	8:05	40.82	12.40	399.12	trace	N/A							
8/3/2006	10:00	40.82	12.40	399.12	trace	N/A							
8/3/2006	12:50	40.82	12.42	399.1	trace	N/A							
8/3/2006	15:10	40.82	12.43	399.09	trace	N/A							
8/4/2006	6:40	40.82	12.43	399.09	trace	N/A							
8/4/2006	8:57	40.82	12.42	399.1	trace	N/A							
8/4/2006	10:59	40.82	12.35	399.17	trace	N/A							
8/4/2006	13:59	40.82	12.17	399.35	trace	N/A							
8/10/2006	8:56	40.82	12.85	398.67	trace	N/A							
8/17/2006	14:21	40.82	13.29	398.23	trace	N/A							
8/23/2006	14:11	40.75	13.27	398.25	trace	N/A							
9/20/2006	15:10	40.75	13.42	398.1	trace	N/A							
10/26/2006	15:33	40.75	11.33	400.19	trace	N/A							
11/29/2006	15:10	40.75	12.81	398.71	40.73	0.01							
12/27/2006	13:04	40.75	10.92	400.6	40.61	0.09							
12/23/2007	15:40	40.75	12.84	398.68	see comment	0.21							Approx. 2.5 inch thick layer of NAPL is 9.5 inches from bottom of well.
3/21/2007	16:15	40.75	13.04	398.48	38.52	1.46		0.45		13.1	39.08		Pumped until battery died.
4/26/2007	16:45	40.75	11.4	400.12	38.67	1.40	16:45	1.5	16:45		11.39	Trace	
5/30/2007	15:35	40.75	13.21	398.31	trace	N/A							
6/19/2007	17:04	40.75	13.84	397.68	40.25	0.33							
7/17/2007	18:54	40.75	13.64	397.88	40.10	0.42							
8/21/2007	17:00	40.75	13.74	397.78	40.00	0.49	17:00	1	17:00		12.99	Trace	
9/27/2007	18:32	40.75	13.75	397.77	40.13	0.62		0.3			13.45	Trace	
10/27/2007	12:48	40.75	12.66	398.86	40.35	0.40		0.56			12.26	Trace	
11/18/2007	10:15	40.75	11.90	399.62	40.54	0.21							
12/8/2007	11:22	40.75	12.90	398.62	40.33	0.42		0.4			12.5	Trace	
1/10/2008	13:14	40.75	10.56	400.96	40.33	0.42		0.125			10.78	Trace	
2/14/2008	15:35	40.75	11.42	400.1	40.41	0.34		0.1			11.52	Trace	
3/27/2008	16:06	40.75	11.78	399.74	39.96	0.79	19:30	0.125	19:50		19.54	Trace	
4/22/2008	16:02	40.75	12.90	398.62	39.85	0.90	17:35	1.1	18:17		13.8	Trace	
5/22/2008	10:41	40.75	13.25	398.27	40.35	0.40	14:20	0.2612	14:32		11.85	Trace	
6/26/2008	14:20	40.75	13.35	398.17	39.66	0.09							
7/29/2008	14:52	40.75	13.05	398.47	39.81	0.94	17:35	0.63			13.99	Trace	
8/28/2008	16:37	40.75	13.49	398.03	40.15	0.60		0.24			14.09	Trace	
				40.75	411.52								
10/30/2008	17:01	40.75	10.55	400.97	40.10	0.42	9:47	0.30	9:53		11.55	Trace	
11/21/2008	9:31	40.75	12.35	399.17	40.46	N/A		N/A			N/A	N/A	
12/17/2008	16:35	40.75	10.81	400.71	40.55	N/A		N/A			N/A	N/A	
2/19/2009	14:56	40.75	12.70	398.82	40.50	N/A		N/A			N/A	N/A	
3/25/2009	16:02	40.75	12.83	398.69	40.65	N/A		N/A			N/A	N/A	
4/23/2009	17:47	40.75	12.57	398.95	39.86	0.58		0.76			12.89	Trace	
5/26/2009	17:35	40.75	13.39	398.13	40.70	N/A		N/A			N/A	N/A	
6/24/2009	17:19	40.75	12.90	398.62	40.35	0.26		0.75			13.22	Trace	
7/30/2009	16:42	40.75	13.58	397.94	40.55	N/A		N/A			N/A	N/A	
8/31/2009	15:08	40.75	12.93	398.59	39.80	0.62		0.80			13.17	Trace	
9/21/2009	15:52	40.75	13.80	397.72	Trace	N/A							
10/21/2009	15:58	40.75	13.20	398.32	Trace	N/A							
11/18/2009	15:43	40.75	12.40	399.12	39.05	1.11		1.15			12.67	Trace	
12/1/2009	14:44	40.75	14.78	396.74	40.70	N/A							
1/13/2010	14:18	40.75	13.30	398.22	Trace	N/A							
Additional Comments: No January 2009 results due to heavy snowfall.													

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-108 TOWP: 411.59

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging				Comments/Notes		
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Pump Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
7/31/2006	8:40	40.37	11.07	400.52	N/D	N/A							Soft well bottom
7/31/2006	13:50	40.37	11.22	400.37	N/D	N/A							
7/31/2006	15:05	40.37	11.25	400.34	N/D	N/A							
8/1/2006	8:10	40.37	11.77	399.82	N/D	N/A							Soft well bottom
8/1/2006	14:10	40.37	11.91	399.68	N/D	N/A							
8/1/2006	15:50	40.37	11.91	399.68	N/D	N/A							
8/2/2006	7:45	40.37	12.21	399.38	N/D	N/A							Soft well bottom
8/2/2006	12:00	40.37	12.28	399.31	N/D	N/A							
8/2/2006	15:43	40.37	12.32	399.27	N/D	N/A							
8/3/2006	8:10	40.37	12.40	399.19	N/D	N/A							Soft well bottom
8/3/2006	10:05	40.37	12.41	399.18	N/D	N/A							
8/3/2006	12:53	40.37	12.43	399.16	N/D	N/A							
8/3/2006	15:13	40.37	12.43	399.16	N/D	N/A							
8/4/2006	6:42	40.37	12.44	399.15	N/D	N/A							Soft well bottom
8/4/2006	8:59	40.37	12.42	399.17	N/D	N/A							
8/4/2006	11:02	40.37	12.36	399.23	N/D	N/A							
8/4/2006	14:02	40.37	12.28	399.31	N/D	N/A							
8/10/2006	8:59	40.37	12.85	398.74	N/D	N/A							
8/17/2006	14:27	40.37	13.31	398.28	N/D	N/A							
8/23/2006	14:16	40.37	13.29	398.3	N/D	N/A							
9/20/2006	15:14	40.37	13.43	398.16	N/D	N/A							
10/26/2006	15:37	40.37	11.33	400.26	N/D	N/A							
11/29/2006	15:15	40.37	12.85	398.74	N/D	N/A							
11/27/2006	13:00	40.37	10.98	400.61	N/D	N/A							
1/23/2007	15:55	40.37	12.82	398.77	N/D	N/A							
3/21/2007	15:55	40.37	13.06	398.53	N/D	N/A							
4/26/2007	16:15	40.37	11.45	400.14	N/D	N/A							
5/30/2007	15:20	40.37	13.22	398.37	N/D	N/A							
6/19/2007	17:09	40.37	13.65	397.94	Trace	N/A							
7/17/2007	19:04	40.37	13.71	397.88	N/D	N/A							
8/21/2007	17:08	40.37	13.8	397.79	N/D	N/A							
9/27/2007	18:36	40.37	13.86	397.73	N/D	N/A							
10/27/2007	12:54	40.37	12.63	398.96	N/D	N/A							
11/18/2007	10:20	40.37	11.94	399.65	N/D	N/A							
12/8/2007	11:26	40.37	12.94	398.65	N/D	N/A							
1/10/2008	12:33	40.37	10.68	400.91	Trace	N/A							
2/14/2008	15:40	40.37	11.43	400.16	N/D	N/A							
3/27/2008	16:09	40.37	11.78	399.81	N/D	N/A							
4/22/2008	6:00	40.37	12.9	398.69	40.36	0.01							
5/22/2008	10:47	40.37	13.29	398.3	Trace	N/A							
6/26/2008	14:25	40.37	13.39	398.2	Trace	N/A							
7/29/2008	14:57	40.20	12.98	398.61	Trace	N/A							
8/28/2008	16:42	40.37	13.55	398.04	40.15	0.05							
				40.20		411.59							
10/30/2008	17:08	40.20	10.29	401.30	Trace	N/A							
11/21/2008	9:35	40.20	12.45	399.14	Trace	N/A							
12/17/2008	16:39	40.20	10.9	400.69	Trace	N/A							
2/19/2009	15:01	40.20	12.68	398.91	Trace	N/A							
3/25/2009	16:08	40.20	12.81	398.78	N/D	N/A							
4/23/2009	17:53	40.20	12.59	399.00	N/D	N/A							
5/26/2009	17:39	40.20	13.42	398.17	N/D	N/A							
6/24/2009	17:26	40.20	12.91	398.68	40.10	N/A							
7/30/2009	16:48	40.20	13.59	398.00	40.10	N/A							
8/31/2009	15:11	40.20	12.93	398.66	40.10	N/A							
9/21/2009	15:58	40.20	13.80	397.79	40.10	N/A							
10/21/2009	16:01	40.20	13.20	398.39	39.80	0.26	0.25		13.19	Trace			
11/18/2009	15:48	40.20	12.40	399.19	Trace	N/A							
12/1/2009	14:49	40.20	12.76	398.83	Trace	N/A							
1/13/2010	14:22	40.20	13.33	398.26	Trace	N/A							
Additional Comments:		No January 2009 results due to heavy snowfall.											

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: EW-109

TOWP: 411.59

Well Dia.: 4"

Pre-Removal Gauging							Post-Removal Gauging						
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	Comments/Notes
7/31/2006	8:45	39.45	11.07	400.52	N/D	N/A							Soft well bottom
7/31/2006	13:55	39.45	11.22	400.37	N/D	N/A							
7/31/2006	15:10	39.45	11.25	400.34	N/D	N/A							
8/1/2006	8:15	39.45	11.77	399.82	N/D	N/A							Soft well bottom
8/1/2006	14:20	39.45	11.91	399.68	N/D	N/A							
8/1/2006	15:55	39.45	11.91	399.68	N/D	N/A							
8/2/2006	7:50	39.45	12.21	399.38	N/D	N/A							Soft well bottom
8/2/2006	12:05	39.45	12.25	399.34	N/D	N/A							
8/2/2006	15:47	39.45	12.29	399.3	N/D	N/A							
8/3/2006	8:15	39.45	12.35	399.24	N/D	N/A							
8/3/2006	10:10	39.45	12.38	399.21	N/D	N/A							
8/3/2006	12:55	39.45	12.39	399.2	N/D	N/A							
8/3/2006	15:18	39.45	12.44	399.15	N/D	N/A							
8/4/2006	6:45	39.45	12.39	399.2	N/D	N/A							
8/4/2006	9:01	39.45	12.37	399.22	N/D	N/A							
8/4/2006	11:04	39.45	12.30	399.29	N/D	N/A							
8/4/2006	14:04	39.45	12.21	399.38	N/D	N/A							
8/10/2006	9:01	39.45	12.82	398.77	N/D	N/A							
8/17/2006	14:30	39.45	13.28	398.31	N/D	N/A							
8/23/2006	14:19	39.45	13.25	398.34	N/D	N/A							
9/20/2006	15:18	39.45	13.39	398.2	N/D	N/A							
10/26/2006	15:40	39.45	11.31	400.28	N/D	N/A							
11/29/2006	15:17	39.45	12.81	398.78	N/D	N/A							
12/27/2006	13:02	39.45	10.95	400.64	N/D	N/A							
1/23/2007	16:00	39.45	12.77	398.82	N/D	N/A							
3/21/2007	15:50	39.45	13.07	398.52	N/D	N/A							
4/26/2007	16:18	39.45	11.44	400.15	N/D	N/A							
5/30/2007	15:25	39.45	13.21	398.38	N/D	N/A							
6/19/2007	17:15	39.45	13.54	398.05	N/D	N/A							
7/17/2007	19:10	39.45	13.69	397.9	N/D	N/A							
8/21/2007	17:10	39.45	14.29	397.3	N/D	N/A							
9/27/2007	18:39	39.45	13.86	397.73	N/D	N/A							
10/27/2007	12:59	39.45	12.74	398.85	N/D	N/A							
11/18/2007	10:24	39.45	11.81	399.78	N/D	N/A							
12/8/2007	11:29	39.45	12.79	398.8	N/D	N/A							
1/10/2008	12:31	39.45	10.9	400.69	N/D	N/A							
2/14/2008	15:43	39.45	11.49	400.1	N/D	N/A							
3/27/2008	16:12	39.45	11.81	399.78	N/D	N/A							
4/22/2008	16:31	39.45	12.89	398.7	N/D	N/A							
5/22/2008	10:53	39.45	13.21	398.38	N/D	N/A							
6/26/2008	14:30	39.45	13.4	398.19	N/D	N/A							
7/29/2008	15:01	39.45	12.95	398.64	N/D	N/A							
8/28/2008	16:47	39.45	13.49	398.1	N/D	N/A							
				39.35		411.59							
10/30/2008	17:12	39.35	10.51	401.08	Trace	N/A							
11/21/2008	9:41	39.35	12.40	399.19	N/D	N/A							
12/17/2008	16:44	39.35	9.82	401.77	N/D	N/A							
2/19/2009	15:05	39.35	12.65	398.94	N/D	N/A							
3/25/2009	16:15	39.35	12.78	398.81	N/D	N/A							
4/23/2009	18:00	39.35	12.61	398.98	N/D	N/A							
5/26/2009	17:44	39.35	13.36	398.23	N/D	N/A							
6/24/2009	17:30	39.35	12.89	398.70	N/D	N/A							
7/30/2009	16:54	39.35	13.54	398.05	N/D	N/A							
8/31/2009	15:17	39.35	12.95	398.64	N/D	N/A							
9/21/2009	16:03	39.35	13.78	397.81	N/D	N/A							
10/21/2009	16:06	39.35	13.15	398.44	N/D	N/A							
11/18/2009	15:52	39.35	12.38	399.21	N/D	N/A							
12/1/2009	14:58	39.35	12.74	398.85	N/D	N/A							
1/13/2010	14:28	39.35	13.24	398.35	N/D	N/A							
Additional Comments: No January 2009 results due to heavy snowfall.													

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: Sump No. 1 TOWP: 412.71

Well Dia.: 6"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
10/26/2006	14:50	13.83	10.03	402.68	N/D	N/A							
11/29/2006	14:32	13.83	4.76	407.95	N/D	N/A							
12/27/2006	12:25	13.83	3.82	408.89	N/D	N/A							
1/23/2007	15:00	13.83	4.99	407.72	N/D	N/A							
3/21/2007	15:30	13.83	3.76	408.95	N/D	N/A							Depth to water is depth to ice. Thick ice present in well.
4/26/2007	15:33	13.83	3.87	408.84	N/D	N/A							
5/30/2007	14:46	13.83	5.25	407.46	N/D	N/A							
6/19/2007	16:00	13.83	6	406.71	N/D	N/A							
7/17/2007	17:19	13.83	6.26	406.45	N/D	N/A							
8/21/2007	15:34	13.83	8.51	404.2	N/D	N/A							
9/27/2007	17:53	13.83	8.22	404.49	N/D	N/A							
10/27/2007	12:00	13.83	3.66	409.05	N/D	N/A							
11/18/2007	9:37	13.83	3.81	408.90	N/D	N/A							
12/8/2007	13:40	13.83	3.4	409.31	N/D	N/A							
1/10/2008	12:17	13.83	3.5	409.21	N/D	N/A							
2/14/2008	15:00	13.83	3.5	409.21	N/D	N/A							
3/27/2008	15:09	13.83	4.24	408.47	N/D	N/A							
4/22/2008	15:37	13.83	4.89	407.82	N/D	N/A							
5/22/2008	9:55	13.83	5.19	407.52	N/D	N/A							
6/26/2008	13:30	13.83	5.58	407.13	N/D	N/A							Odor
7/29/2008	14:12	13.83	4.09	408.62	N/D	N/A							
8/28/2008	15:57	13.83	5.20	407.51	N/D	N/A							
		13.83		412.71									
10/30/2008	16:05	13.83	3.40	409.31	N/D	N/A							
11/21/2008	9:00	13.83	3.89	408.82	N/D	N/A							
12/16/2008	16:02	13.83	3.44	409.27	N/D	N/A							
2/19/2009	14:24	13.83	3.82	408.89	N/D	N/A							
3/25/2009	14:54	13.83	4.15	408.56	N/D	N/A							
4/23/2009	18:05	13.83	4.37	408.34	N/D	N/A							
5/26/2009	17:49	13.83	5.31	407.40	N/D	N/A							
6/24/2009	17:36	13.83	4.61	408.10	N/D	N/A							
7/30/2009	17:01	13.83	6.20	406.51	N/D	N/A							
8/31/2009	15:27	13.83	4.21	408.50	N/D	N/A							
9/21/2009	14:08	13.83	6.44	406.27	N/D	N/A							
10/21/2009	15:26	13.83	4.59	408.12	N/D	N/A							
11/18/2009	15:11	13.83	4.62	408.09	N/D	N/A							
12/1/2009	13:55	13.83	3.42	409.29	N/D	N/A							
1/13/2010	13:08	13.83	4.15	408.56	N/D	N/A							

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: Sump No. 2 TOWP: 412.77

Well Dia.: 6"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
10/26/2006	14:52	13.88	10.10	402.67	N/D	N/A							
11/29/2006	14:34	13.88	4.83	407.94	N/D	N/A							
12/27/2006	12:27	13.88	3.87	408.90	N/D	N/A							
1/23/2007	15:02	13.88	5.05	407.72	N/D	N/A							
3/21/2007	15:32	13.88	3.58	409.19	N/D	N/A							Depth to water is depth to ice. Thick ice present in well.
4/26/2007	15:35	13.88	3.94	408.83	N/D	N/A							
5/30/2007	14:48	13.88	5.33	407.44	N/D	N/A							
6/19/2007	16:03	13.88	6.05	406.72	N/D	N/A							
7/17/2007	17:25	13.88	6.35	406.42	N/D	N/A							
8/21/2007	15:42	13.88	7.6	405.17	N/D	N/A							
9/27/2007	17:55	13.88	8.31	404.46	N/D	N/A							
10/27/2007	12:04	13.88	3.71	409.06	N/D	N/A							
11/18/2007	9:40	13.88	3.9	408.87	N/D	N/A							
12/8/2007	10:40	13.88	3.68	409.09	N/D	N/A							
1/10/2008	12:19	13.88	3.81	408.96	N/D	N/A							
2/14/2008	15:02	13.88	3.55	409.22	N/D	N/A							
3/27/2008	15:11	13.88	4.33	408.44	N/D	N/A							
4/22/2008	15:40	13.88	4.93	407.84	N/D	N/A							
5/22/2008	9:57	13.88	5.26	407.51	N/D	N/A							
6/26/2008	13:31	13.88	5.65	407.12	N/D	N/A							Odor
7/29/2008	14:14	13.88	4.03	408.74	N/D	N/A							
8/28/2008	16:00	13.88	5.28	407.49	N/D	N/A							
		13.88		412.77									
10/30/2008	16:05	13.88	3.47	409.30	N/D	N/A							
11/21/2008	9:01	13.88	3.92	408.85	N/D	N/A							
12/17/2008	16:03	13.88	3.54	409.23	N/D	N/A							
2/19/2009	14:25	13.88	3.89	408.88	N/D	N/A							
3/25/2009	14:56	13.88	4.71	408.06	N/D	N/A							
4/23/2009	14:56	13.88	4.50	408.27	N/D	N/A							
5/26/2009	17:50	13.88	5.40	407.37	N/D	N/A							
6/24/2009	17:37	13.88	4.69	408.08	N/D	N/A							
7/30/2009	17:02	13.88	6.30	406.47	N/D	N/A							
8/31/2009	15:29	13.88	4.27	408.50	N/D	N/A							
9/21/2009	14:09	13.88	6.52	406.25	N/D	N/A							
10/21/2009	15:27	13.88	4.66	408.11	N/D	N/A							
11/18/2009	15:12	13.88	4.68	408.09	N/D	N/A							
12/1/2009	13:56	13.88	3.48	409.29	N/D	N/A							
1/13/2010	13:10	13.88	4.20	408.57	N/D	N/A							

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: Sump No. 3 TOWP: 412.53

Well Dia.: 6"

Pre-Removal Gauging							Post-Removal Gauging					Comments/Notes	
Date	Time	TD	DTW	Water Elevation	DTP	Calc. DNAPL (gal)	Removal Time	DNAPL Removed (gal)	Time	TD	DTW	DTP	
10/26/2006	14:54	13.77	9.86	402.67	N/D	N/A							
11/29/2006	14:36	13.77	4.59	407.94	N/D	N/A							
12/27/2006	12:30	13.77	3.63	408.90	N/D	N/A							
1/23/2007	15:04	13.77	4.82	407.71	N/D	N/A							
3/21/2007	15:34	13.77	3.4	409.13	N/D	N/A							Depth to water is depth to ice. Thick ice present in well.
4/26/2007	15:37	13.77	3.69	408.84	N/D	N/A							
5/30/2007	14:50	13.77	5.09	407.44	N/D	N/A							
6/19/2007	16:06	13.77	5.84	406.69	N/D	N/A							
7/17/2007	17:28	13.77	6.1	406.43	N/D	N/A							
8/21/2007	15:44	13.77	7.39	405.14	N/D	N/A							
9/27/2007	17:57	13.77	8.07	404.46	N/D	N/A							
10/27/2007	12:05	13.77	3.61	408.92	N/D	N/A							
11/18/2007	9:42	13.77	3.63	408.90	N/D	N/A							
12/8/2007	10:42	13.77	3.43	409.10	N/D	N/A							
1/10/2008	12:21	13.77	3.6	408.93	N/D	N/A							
2/14/2008	15:04	13.77	3.3	409.23	N/D	N/A							
3/27/2008	15:12	13.77	4.08	408.45	N/D	N/A							
4/22/2008	15:42	13.77	4.7	407.83	N/D	N/A							
5/22/2008	9:59	13.77	5.82	406.71	N/D	N/A							
6/26/2008	13:33	13.77	5.4	407.13	N/D	N/A							Odor
7/29/2008	14:16	13.77	3.93	408.60	N/D	N/A							
8/28/2008	16:02	13.77	5.01	407.52	N/D	N/A							
		13.77		412.53									
10/30/2008	16:07	13.77	3.24	409.29	N/D	N/A							
11/21/2008	9:02	13.77	3.70	408.83	N/D	N/A							
12/17/2008	16:04	13.77	3.29	409.24	N/D	N/A							
2/19/2009	14:26	13.77	3.65	408.88	N/D	N/A							
3/25/2009	14:58	13.77	4.17	408.36	N/D	N/A							
4/23/2009	18:07	13.77	4.22	408.31	N/D	N/A							
5/26/2009	17:51	13.77	5.15	407.38	N/D	N/A							
6/24/2009	17:38	13.77	4.65	407.88	N/D	N/A							
7/30/2009	17:03	13.77	6.09	406.44	N/D	N/A							
8/31/2009	15:31	13.77	4.05	408.48	N/D	N/A							
9/21/2009	15:31	13.77	6.29	406.24	N/D	N/A							
10/21/2009	15:28	13.77	4.43	408.10	N/D	N/A							
11/18/2009	15:13	13.77	4.44	408.09	N/D	N/A							
12/1/2009	13:57	13.77	3.25	409.28	N/D	N/A							
1/13/2010	13:11	13.77	3.90	408.63	N/D	N/A							

Additional Comments: No January 2009 results due to heavy snowfall.

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: M09-3S TOWP: 409.54

Well Dia.: 2"

Pre-Removal Gauging											
Date	Time	TD	DTW	Water Elevation	DTP	DNAPL Thickness (ft.)	Pumping Duration (min.)	DNAPL Removed (gal)	Depth to DNAPL After Pumping	DNAPL Thickness After Pumping (ft.)	Comments/Notes
4/22/2009	16:40	10.42	2.21	407.33	10.42	Trace		N/A	N/A	N/A	
5/26/2009	16:20	10.55	3.03	406.51	10.41	0.14		N/A	N/A	N/A	
6/24/2009	18:06	10.60	2.42	407.12	10.40	0.20		N/A	N/A	N/A	
7/30/2009	17:23	10.60	6.99	402.55	9.55	1.05		N/A	N/A	N/A	
8/31/2009	15:47	10.60	6.99	402.55	9.10	1.45	2	0.10	Trace	Trace	
9/21/2009	16:29	10.60	5.23	404.31	9.10	1.45	3	0.15	Trace	Trace	
10/21/2009	16:25	10.60	4.20	405.34	9.78	0.80	2	0.10	Trace	Trace	
11/18/2009	14:50	10.60	3.89	405.65	9.91	0.67	2	0.10	Trace	Trace	
12/1/2009	14:32	10.58	3.36	406.18	10.04	0.52	2	0.10	Trace	Trace	
1/13/2010	13:30	10.48	3.09	406.45	10.09	0.39	5	0.25	Trace	Trace	

Additional Comments:

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet

Utica, NY DNAPL Pilot Study
Passive DNAPL Recovery

Well No.: M09-3I

TOWP: 409.70

Well Dia.: 2"

Pre-Removal Gauging											
Date	Time	TD	DTW	Water Elevation	DTP	DNAPL Thickness (ft.)	Pumping Duration (min)	DNAPL Removed (gal)	Depth to DNAPL After Pumping (ft.)	DNAPL Thickness After Pumping (ft.)	Comments/Notes
4/22/2009	16:42	36.20	10.90	398.80	35.89	0.31		N/A	N/A	N/A	
5/26/2009	16:25	36.17	11.80	397.90	35.50	0.67		N/A	N/A	N/A	
6/24/2009	18:08	36.20	11.13	398.57	34.88	1.32		N/A	N/A	N/A	
7/30/2009	17:25	36.20	11.91	397.79	34.55	1.65		N/A	N/A	N/A	
8/31/2009	15:49	36.25	11.91	397.79	34.55	1.85	2	0.15	Trace	Trace	
9/21/2009	16:32	36.20	12.18	397.52	34.85	1.35	3	0.15	Trace	Trace	
10/21/2009	16:26	36.20	11.52	398.18	34.85	0.80	2	0.10	Trace	Trace	
11/18/2009	14:54	36.20	10.78	398.92	35.40	0.90	3	0.10	Trace	Trace	
12/1/2009	14:40	36.20	11.09	398.61	35.28	0.94	5	0.15	Trace	Trace	
1/13/2010	13:34	36.19	11.68	398.02	35.91	0.28	NA	N/A	N/A	N/A	PT below threshold, no pumping required.

Additional Comments:

N/D = Not Detected

DTW = Depth to Water in feet

DTP = Depth to Product in feet

TD = Total Depth in feet